

# LAMPIRAN

## 1. Koding Android

### a. Beranda Activity

```
package kampus.arum.jamurku;

import android.annotation.SuppressLint;
import android.app.Activity;
import android.app.ProgressDialog;
import android.content.Intent;
import android.os.Bundle;
import android.support.design.widget.FloatingActionButton;
import android.support.design.widget.Snackbar;
import android.support.v4.widget.SwipeRefreshLayout;
import android.util.Log;
import android.view.View;
import android.support.v4.view.GravityCompat;
import android.support.v7.app.ActionBarDrawerToggle;
import android.view.MenuItem;
import android.support.design.widget.NavigationView;
import android.support.v4.widget.DrawerLayout;

import android.support.v7.app.AppCompatActivity;
import android.support.v7.widget.Toolbar;
import android.view.Menu;
import android.widget.AdapterView;
import android.widget.AdapterView.OnItemClickListener;
import android.widget.ArrayAdapter;
import android.widget.ProgressBar;
import android.widget.Spinner;
import android.widget.TextView;
import android.widget.Toast;

import com.google.gson.Gson;

import java.security.spec.ECField;
import java.util.ArrayList;
import java.util.HashMap;
import java.util.Timer;
import java.util.TimerTask;

import kampus.arum.jamurku.model.entity.DataAlatList;
import kampus.arum.jamurku.model.entity.DataMonitoringList;
import kampus.arum.jamurku.model.parse.ApiData;
import kampus.arum.jamurku.model.parse.ResponseAlatList;
import kampus.arum.jamurku.model.parse.ResponseMonitoringBulan;
import kampus.arum.jamurku.model.parse.ResponseMonitoringList;
import kampus.arum.jamurku.settings.UrlAkses;
import kampus.arum.jamurku.utils.ConvertWaktu;
import retrofit2.Call;
import retrofit2.Callback;
import retrofit2.Response;

public class BerandaActivity extends AppCompatActivity
    implements NavigationView.OnNavigationItemSelectedListener,
    SwipeRefreshLayout.OnRefreshListener {
    private String tag = getClass().getSimpleName();
    private Activity activity = this;

    private SwipeRefreshLayout swipe;
    private ProgressBar loading;
    private Spinner spbrndalat;
    private TextView tvbrndwaktu;
    private TextView tvbrndsuhu;
    private TextView tvbrndkelembaban;
    private TextView tvbrndkondisi;

    private Timer timer;

    private ArrayList<DataAlatList> dataAlatListArrayList = new ArrayList<>();
    private ArrayList<DataMonitoringList> dataMonitoringListArrayList = new
    ArrayList<>();

    private String kode_alat = "";

    @SuppressWarnings("RestrictedApi")
    @Override
    protected void onCreate(Bundle savedInstanceState) {
```

```

super.onCreate(savedInstanceState);
setContentView(R.layout.layout_beranda);
Toolbar toolbar = findViewById(R.id.toolbar);
setSupportActionBar(toolbar);
FloatingActionButton fab = findViewById(R.id.fab);
fab.setVisibility(View.GONE);
fab.setOnClickListener(new View.OnClickListener() {
    @Override
    public void onClick(View view) {
        Intent intent = new Intent(activity, LaporanActivity.class);
        startActivity(intent);
    }
});
DrawerLayout drawer = findViewById(R.id.drawer_layout);
NavigationView navigationView = findViewById(R.id.nav_view);
ActionBarDrawerToggle toggle = new ActionBarDrawerToggle(
    this, drawer, toolbar, R.string.navigation_drawer_open,
R.string.navigation_drawer_close);
drawer.addDrawerListener(toggle);
toggle.syncState();
navigationView.setNavigationItemSelectedListener(this);
navigationView.setItemIconTintList(null);

swipe = findViewById(R.id.swipe);
loading = findViewById(R.id.loading);
spbrndalat = findViewById(R.id.spbrndalat);
tvbrndwaktu = findViewById(R.id.tvbrndwaktu);
tvbrndsuhu = findViewById(R.id.tvbrndsuhu);
tvbrndkelembaban = findViewById(R.id.tvbrndkelembaban);
tvbrndkondisi = findViewById(R.id.tvbrndkondisi);

swipe.setOnRefreshListener(this);
timerRefresh();
}

@Override
protected void onResume() {
super.onResume();
doGetDataAlat();
}

private void timerRefresh(){
timer = new Timer();
timer.schedule(new TimerTask() {
    @Override
    public void run() {
        runOnUiThread(new Runnable() {
            @Override
            public void run() {
                doGetDataTerbaru();
            }
        });
    }
}, 5000, 5000);
} //waktu pengambilan data

private void doGetDataAlat() {
if (!swipe.isRefreshing()) {
swipe.setRefreshing(true);
}

dataAlatListArrayList = new ArrayList<>();
String base_url = UrlAkses.BASE_URL;
String url_data = base_url + UrlAkses.URL_API;

HashMap<String, String> params = new HashMap<>();

Log.e(tag, "param url_data      : " + url_data);

Call<ResponseAlatList> call =
ApiData.ApiService(url_data).getDataAlat(params);
call.enqueue(new Callback<ResponseAlatList>() {
    @Override
    public void onResponse(Call<ResponseAlatList> call,
Response<ResponseAlatList> response) {
        Log.e(tag, "url      : " + response.raw().request().url());
        Log.e(tag, "response : " + new
Gson().toJson(response.body()));

        String message = "";
        int success = 0;

```

```

        dataAlatListArrayList = new ArrayList<>();
        try{
            success = response.body().getSuccess();
            message = response.body().getMessage();

            if (response.isSuccessful() && success == 1) {

dataAlatListArrayList.addAll(response.body().getData());
            }
        }catch (Exception e){
            e.printStackTrace();
            message = "Terjadi Kesalahan #1";
        }

        doShowDataAlat(message, success);
    }

    @Override
    public void onFailure(Call<ResponseAlatList> call, Throwable t) {
        t.printStackTrace();

        String message = "";
        int success = 0;
        doShowDataTerbaru(message, success);
    }
}
} //ngambil data alat

private void doShowDataAlat(final String message, int success) {
    if (swipe.isRefreshing()) {
        swipe.setRefreshing(false);
    }

    ArrayList<String> bulan_array = new ArrayList<>();
    bulan_array.add("Pilih Alat");

    int size = dataAlatListArrayList.size();
    for (int i = 0; i < size; i++) {
        String sp = dataAlatListArrayList.get(i).getKodeAlat() + " - " +
dataAlatListArrayList.get(i).getNamaAlat();
        bulan_array.add(sp);
    }

    int current = 0;
    if(size>0){
        current=1;
    }
    ArrayAdapter<String> adapter = new ArrayAdapter<>(activity,
android.R.layout.simple_list_item_1, bulan_array);
    spbrndalat.setAdapter(adapter);
    spbrndalat.setSelection(current);
    spbrndalat.setOnItemClickListener(new
AdapterView.OnItemClickListener() {
        @Override
        public void onItemClick(AdapterView<?> parent, View view, int
position, long id) {
            if (position > 0) {
                try{
                    kode_alat = dataAlatListArrayList.get(position -
1).getKodeAlat();
                    Log.e(tag, "onItemSelected : " + kode_alat);

                    doGetDataTerbaru();
                }catch (Exception e){
                    e.printStackTrace();
                }
            }
        } else {
            kode_alat = "-";

            dataMonitoringListArrayList = new ArrayList<>();
            doShowDataTerbaru("Silakan Pilih Alat...", 0);
        }
    }

    @Override
    public void onNothingSelected(AdapterView<?> parent) {
    }
}
} //nampilin data alat

```

```

//Mengambil data
private void doGetDataTerbaru() {
    loading.setIndeterminate(true);

    dataMonitoringListArrayList = new ArrayList<>();
    String base_url = UrlAkses.BASE_URL;
    String url_data = base_url + UrlAkses.URL_API;

    HashMap<String, String> params = new HashMap<>();
    params.put("kode_alat", kode_alat);

    Log.e(tag, "param url_data      : " + url_data);
    Log.e(tag, "param kode_alat     : " + kode_alat);

    Call<ResponseMonitoringList> call =
    ApiData.ApiService(url_data).getDataTerbaru(params);
    call.enqueue(new Callback<ResponseMonitoringList>() {
        @Override
        public void onResponse(Call<ResponseMonitoringList> call,
        Response<ResponseMonitoringList> response) {
            Log.e(tag, "url          : " + response.raw().request().url());
            Log.e(tag, "response     : " + new
            Gson().toJson(response.body()));

            String message = "";
            int success = 0;

            dataMonitoringListArrayList = new ArrayList<>();
            try{
                success = response.body().getSuccess();
                message = response.body().getMessage();

                if (response.isSuccessful() && success == 1) {
                    dataMonitoringListArrayList.addAll(response.body().getData());
                }
            } catch (Exception e){
                e.printStackTrace();
                message = "Terjadi Kesalahan #1";
            }

            doShowDataTerbaru(message, success);
        }

        @Override
        public void onFailure(Call<ResponseMonitoringList> call, Throwable
        t) {
            t.printStackTrace();

            String message = "";
            int success = 0;
            doShowDataTerbaru(message, success);
        }
    });
}

//Menampilkan Data
private void doShowDataTerbaru(final String message, int success) {
    if (swipe.isRefreshing()) {
        swipe.setRefreshing(false);
    }

    int size = dataMonitoringListArrayList.size();
    if(size>0){

        String waktu = dataMonitoringListArrayList.get(0).getDataMasuk();
        //String waktu = "2019-05-13 12:12:12";
        tvbrndwaktu.setText(ConvertWaktu.toHuman(waktu));

        tvbrndsuhu.setText(dataMonitoringListArrayList.get(0).getSuhu()+"\u00B0C");

        tvbrndkelembaban.setText(dataMonitoringListArrayList.get(0).getKelembaban()+"%");

        tvbrndkondisi.setText(dataMonitoringListArrayList.get(0).getKondisi().toUpperCase());
    } else{
        tvbrndwaktu.setText("-");
        tvbrndsuhu.setText("-");
        tvbrndkelembaban.setText("-");
        tvbrndkondisi.setText("-");
    }
}

```

```

        final View view = loading;
        view.postDelayed(new Runnable() {
            public void run() {
                ((ProgressBar) view).setIndeterminate(false);
                ((ProgressBar) view).setProgress(100);
            }
        }, 1000);
    }

    @Override
    public void onBackPressed() {
        DrawerLayout drawer = findViewById(R.id.drawer_layout);
        if (drawer.isDrawerOpen(GravityCompat.START)) {
            drawer.closeDrawer(GravityCompat.START);
        } else {
            Toast.makeText(this, "Minimize", Toast.LENGTH_SHORT).show();
            moveTaskToBack(true);
        }
    } //ketika tombol back di klik

    @Override
    public boolean onCreateOptionsMenu(Menu menu) {
        // Inflate the menu; this adds items to the action bar if it is
        present.
        getMenuInflater().inflate(R.menu.act_refresh, menu);
        return true;
    } //untuk membuat option menu

    @Override
    public boolean onOptionsItemSelected(MenuItem item) {
        // Handle action bar item clicks here. The action bar will
        // automatically handle clicks on the Home/Up button, so long
        // as you specify a parent activity in AndroidManifest.xml.
        int id = item.getItemId();

        //noinspection SimplifiableIfStatement
        if (id == R.id.action_refresh) {
            doGetDataTerbaru();
            return true;
        }

        return super.onOptionsItemSelected(item);
    } //handle ketika di klik

    @SuppressWarnings("StatementWithEmptyBody")
    @Override
    public boolean onOptionsItemSelected(MenuItem item) {
        // Handle navigation view item clicks here.
        int id = item.getItemId();

        if (id == R.id.nav_laporan) {
            Intent intent = new Intent(this, LaporanActivity.class);
            startActivity(intent);
        } else if (id == R.id.nav_alat_tambah) {
            Intent intent = new Intent(this, AlatTambahActivity.class);
            startActivity(intent);
        } else if (id == R.id.nav_alat_list) {
            Intent intent = new Intent(this, AlatListActivity.class);
            startActivity(intent);
        } else if (id == R.id.nav_tentang) {
            Intent intent = new Intent(this, TentangActivity.class);
            startActivity(intent);
        } else if (id == R.id.nav_keluar) {
            finish();
        }

        DrawerLayout drawer = findViewById(R.id.drawer_layout);
        drawer.closeDrawer(GravityCompat.START);
        return true;
    }

    @Override
    public void onRefresh() { //ketika ditarik
        doGetDataAlat();
    }
}

```

## b. Alat List Activity

```

package kampus.arum.jamurku;

import android.app.Activity;
import android.app.AlertDialog;
import android.app.ProgressDialog;
import android.content.DialogInterface;
import android.content.Intent;
import android.support.annotation.NonNull;
import android.support.design.widget.FloatingActionButton;
import android.support.v7.app.AppCompatActivity;
import android.os.Bundle;
import android.support.v7.widget.GridLayoutManager;
import android.support.v7.widget.LinearLayoutManager;
import android.support.v7.widget.RecyclerView;
import android.util.Log;
import android.view.Menu;
import android.view.MenuItem;
import android.view.MotionEvent;
import android.view.View;
import android.widget.LinearLayout;
import android.widget.TextView;
import android.widget.Toast;

import com.google.gson.Gson;

import java.util.ArrayList;
import java.util.HashMap;

import kampus.arum.jamurku.adapter.AlatItemAdapter;
import kampus.arum.jamurku.adapter.MonitoringItemAdapter;
import kampus.arum.jamurku.model.entity.DataAlatList;
import kampus.arum.jamurku.model.parse.ApiData;
import kampus.arum.jamurku.model.parse.ResponseAlatHapus;
import kampus.arum.jamurku.model.parse.ResponseAlatList;
import kampus.arum.jamurku.model.parse.ResponseMonitoringList;
import kampus.arum.jamurku.settings.UrlAkses;
import retrofit2.Call;
import retrofit2.Callback;
import retrofit2.Response;

public class AlatListActivity extends AppCompatActivity {
    private String tag = getClass().getSimpleName();
    private Activity activity = this;

    private RecyclerView rvalatlist;
    private LinearLayout llnothing;
    private TextView tvnothing;

    private ProgressDialog loading;

    private ArrayList<DataAlatList> dataAlatListArrayList = new ArrayList<>();

    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.layout_alat_list);
        getSupportActionBar().setDisplayHomeAsUpEnabled(true);

        FloatingActionButton fab = findViewById(R.id.fab);
        fab.setOnClickListener(new View.OnClickListener() {
            @Override
            public void onClick(View view) {
                Intent intent = new Intent(activity, AlatTambahActivity.class);
                startActivity(intent);
            }
        });

        rvalatlist = findViewById(R.id.rvalatlist);
        llnothing = findViewById(R.id.llnothing);
        tvnothing = findViewById(R.id.tvnothing);

        loading = new ProgressDialog(activity);
        loading.setMessage("Mohon Tunggu.....");
        loading.setIndeterminate(false);
        loading.setCancelable(false);
        loading.show();
    }

    @Override
    protected void onResume() {
        super.onResume();

        doGetDataAlat();
    }
}

```

```

private void doGetDataAlat() {
    if (!loading.isShowing()) {
        loading.show();
    }

    dataAlatListArrayList = new ArrayList<>();
    String base_url = UrlAkses.BASE_URL;
    String url_data = base_url + UrlAkses.URL_API;

    HashMap<String, String> params = new HashMap<>();

    Log.e(tag, "param url_data : " + url_data);

    Call<ResponseAlatList> call =
    ApiData.ApiService(url_data).getDataAlat(params);
    call.enqueue(new Callback<ResponseAlatList>() {
        @Override
        public void onResponse(Call<ResponseAlatList> call,
        Response<ResponseAlatList> response) {
            Log.e(tag, "url : " + response.raw().request().url());
            Log.e(tag, "response : " + new
            Gson().toJson(response.body()));

            String message = "";
            int success = 0;

            dataAlatListArrayList = new ArrayList<>();
            try{
                success = response.body().getSuccess();
                message = response.body().getMessage();

                if (response.isSuccessful() && success == 1) {
                    dataAlatListArrayList.addAll(response.body().getData());
                }
            } catch (Exception e){
                e.printStackTrace();
                message = "Terjadi Kesalahan #1";
            }

            doShowDataAlat(message, success);
        }

        @Override
        public void onFailure(Call<ResponseAlatList> call, Throwable t) {
            t.printStackTrace();

            String message = "";
            int success = 0;
            doShowDataAlat(message, success);
        }
    });
}

private void doShowDataAlat (final String message, int success) {
    if (loading.isShowing()) {
        loading.dismiss();
    }

    GridLayoutManager layoutManager = new GridLayoutManager(activity, 1,
    LinearLayoutManager.VERTICAL, false);
    rvalatlist.setHasFixedSize(true);
    rvalatlist.setNestedScrollingEnabled(true);
    rvalatlist.setLayoutManager(layoutManager);
    AlatItemAdapter adapter = new AlatItemAdapter(activity,
    dataAlatListArrayList, new AlatItemAdapter.OnLongClickListener() {
        @Override
        public void onLongClickListener(DataAlatList dataAlatList) {
            String kode_alat = dataAlatList.getKodeAlat();
            popupInfo(kode_alat);
        }
    });
    rvalatlist.setAdapter(adapter);

    int size = dataAlatListArrayList.size();
    if (size > 0) {
        showNothing(false, message);
    } else {
        showNothing(true, message);
    }
}

```

```

private void popupInfo(final String kode_alat) {

    AlertDialog.Builder builder = new AlertDialog.Builder(this);

    builder.setTitle("Hapus Data");
    builder.setMessage("Anda yakin ingin menghapus Data Alat
"+kode_alat+"?");
    builder.setCancelable(false);

    builder.setNegativeButton("Yakin, Hapus Data", new
DialogInterface.OnClickListener() {

        public void onClick(DialogInterface dialog, int which) {
            doPostHapusAlat(kode_alat);
            dialog.dismiss();
        }
    });
    builder.setPositiveButton("Batal", new
DialogInterface.OnClickListener() {

        public void onClick(DialogInterface dialog, int which) {

            dialog.dismiss();
        }
    });

    AlertDialog alert = builder.create();
    alert.show();
}

private void doPostHapusAlat(String kode_alat) {
    if (!loading.isShowing()) {
        loading.show();
    }

    String base_url = UrlAkses.BASE_URL;
    String url_data = base_url + UrlAkses.URL_API;

    HashMap<String, String> params = new HashMap<>();
    params.put("kode_alat", kode_alat);

    Log.e(tag, "param url_data : " + url_data);
    Log.e(tag, "param kode_alat : " + kode_alat);

    Call<ResponseAlatHapus> call =
ApiData.ApiService(url_data).postHapusAlat(params);
    call.enqueue(new Callback<ResponseAlatHapus>() {
        @Override
        public void onResponse(Call<ResponseAlatHapus> call,
Response<ResponseAlatHapus> response) {
            Log.e(tag, "url : " + response.raw().request().url());
            Log.e(tag, "response : " + new
Gson().toJson(response.body()));

            String message = "";
            int success = 0;

            try{
                success = response.body().getSuccess();
                message = response.body().getMessage();
            }catch (Exception e){
                e.printStackTrace();
                message = "Terjadi Kesalahan #1";
            }

            doShowHapusAlat(message, success);
        }

        @Override
        public void onFailure(Call<ResponseAlatHapus> call, Throwable t) {
            t.printStackTrace();

            String message = "";
            int success = 0;
            doShowHapusAlat(message, success);
        }
    });
} //untuk ngirim data

private void doShowHapusAlat(final String message, int success) {
    if (loading.isShowing()) {
        loading.dismiss();
    }
}

```



```

        if(success==1){
            doGetDataAlat();
        }else{
            Toast.makeText(activity, message, Toast.LENGTH_SHORT).show();
        }
    }

    private void showNothing(boolean isShow,String message){
        if(isShow){
            llnothing.setVisibility(View.VISIBLE);
            tvnothing.setText(message);
        }else{
            llnothing.setVisibility(View.GONE);
        }
    }

    @Override
    public boolean onCreateOptionsMenu(Menu menu) {
        // Inflate the menu; this adds items to the action bar if it is
        present.
        getMenuInflater().inflate(R.menu.act_refresh, menu);
        return true;
    }

    @Override
    public boolean onOptionsItemSelected(MenuItem item) {
        // Handle action bar item clicks here. The action bar will
        // automatically handle clicks on the Home/Up button, so long
        // as you specify a parent activity in AndroidManifest.xml.
        int id = item.getItemId();

        //noinspection SimplifiableIfStatement
        if (id == android.R.id.home) {
            onBackPressed();
            return true;
        }else if (id == R.id.action_refresh) {

            return true;
        }

        return super.onOptionsItemSelected(item);
    }

    @Override
    public void onBackPressed() {
        finish();
    }
}

```

### c. Laporan Activity

```

package kampus.arum.jamurku;

import android.app.Activity;
import android.app.ProgressDialog;
import android.support.v7.app.AppCompatActivity;
import android.os.Bundle;
import android.support.v7.widget.GridLayoutManager;
import android.support.v7.widget.LinearLayoutManager;
import android.support.v7.widget.RecyclerView;
import android.util.Log;
import android.view.Menu;
import android.view.MenuItem;
import android.view.View;
import android.widget.AdapterView;
import android.widget.AdapterView.OnItemClickListener;
import android.widget.ArrayAdapter;
import android.widget.ImageView;
import android.widget.LinearLayout;
import android.widget.Spinner;
import android.widget.TextView;

import com.google.gson.Gson;

import java.util.ArrayList;
import java.util.HashMap;

import kampus.arum.jamurku.adapter.MonitoringItemAdapter;
import kampus.arum.jamurku.model.entity.DataAlatList;
import kampus.arum.jamurku.model.entity.DataMonitoringBulan;
import kampus.arum.jamurku.model.entity.DataMonitoringList;
import kampus.arum.jamurku.model.parse.ApiData;

```

```

import kampus.arum.jamurku.model.parse.ResponseAlatList;
import kampus.arum.jamurku.model.parse.ResponseMonitoringBulan;
import kampus.arum.jamurku.model.parse.ResponseMonitoringList;
import kampus.arum.jamurku.settings.UrlAkses;
import retrofit2.Call;
import retrofit2.Callback;
import retrofit2.Response;

public class LaporanActivity extends AppCompatActivity {
    private String tag = getClass().getSimpleName();
    private Activity activity = this;

    private Spinner splapalat;
    private Spinner splapbulan;
    private RecyclerView rvlaplaporan;
    private LinearLayout llnothing;
    private TextView tvnothing;

    private ProgressDialog loading;

    private ArrayList<DataAlatList> dataAlatListArrayList = new ArrayList<>();
    private ArrayList<DataMonitoringBulan> dataMonitoringBulanArrayList = new
ArrayList<>();
    private ArrayList<DataMonitoringList> dataMonitoringListArrayList = new
ArrayList<>();

    private String kode_alat="-";
    private String bulan="-";
    private String tahun="-";

    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.layout_laporan);

        getSupportActionBar().setDisplayHomeAsUpEnabled(true);

        splapalat = findViewById(R.id.splapalat);
        splapbulan = findViewById(R.id.splapbulan);
        rvlaplaporan = findViewById(R.id.rvlaplaporan);
        llnothing = findViewById(R.id.llnothing);
        tvnothing = findViewById(R.id.tvnothing);

        loading = new ProgressDialog(activity);
        loading.setMessage("Mohon Tunggu.....");
        loading.setIndeterminate(false);
        loading.setCancelable(false);
        loading.show();

        doGetDataAlat();
        doGetDataBulan();

        showFooter();
    }

    private void showFooter(){
        LinearLayout lllegend = findViewById(R.id.lllegend);
        final ImageView ivlegend = findViewById(R.id.ivlegend);
        final LinearLayout lldata = findViewById(R.id.lldata);

        lllegend.setOnClickListener(new View.OnClickListener() {
            @Override
            public void onClick(View v) {
                if(lldata.getVisibility() == View.VISIBLE) {
                    lldata.setVisibility(View.GONE);
                } else {
                    lldata.setVisibility(View.VISIBLE);
                }
            }
        });
    }

    private void doGetDataAlat() {
        if (!loading.isShowing()) {
            loading.show();
        }

        dataAlatListArrayList = new ArrayList<>();
        String base_url = UrlAkses.BASE_URL;

```

```

String url_data = base_url + UrlAkses.URL_API;

HashMap<String, String> params = new HashMap<>();

Log.e(tag, "param url_data      : " + url_data);

Call<ResponseAlatList> call =
ApiData.ApiService(url_data).getDataAlat(params);
call.enqueue(new Callback<ResponseAlatList>() {
    @Override
    public void onResponse(Call<ResponseAlatList> call,
Response<ResponseAlatList> response) {
        Log.e(tag, "url      : " + response.raw().request().url());
        Log.e(tag, "response   : " + new
Gson().toJson(response.body()));

        String message = "";
        int success = 0;

        dataAlatListArrayList = new ArrayList<>();
        try{
            success = response.body().getSuccess();
            message = response.body().getMessage();

            if (response.isSuccessful() && success == 1) {
dataAlatListArrayList.addAll(response.body().getData());
            }
        }catch (Exception e){
            e.printStackTrace();
            message = "Terjadi Kesalahan #1";
        }

        doShowDataAlat(message, success);
    }

    @Override
    public void onFailure(Call<ResponseAlatList> call, Throwable t) {
        t.printStackTrace();

        String message = "";
        int success = 0;
        doShowDataMonitoring(message, success);
    }
});
}

private void doShowDataAlat(final String message, int success) {
    if (loading.isShowing()) {
        loading.dismiss();
    }

    ArrayList<String> bulan_array = new ArrayList<>();
    bulan_array.add("Pilih Alat");

    int current = 0;
    int size = dataAlatListArrayList.size();
    for (int i = 0; i < size; i++) {
        String sp = dataAlatListArrayList.get(i).getKodeAlat();
        bulan_array.add(sp);

        Log.e(tag, "kode alat : "+kode_alat+" | sp : "+sp);
        if(kode_alat.equalsIgnoreCase("-")){
            current=1;
        }else{
            if(kode_alat.equalsIgnoreCase(sp)){
                current=i+1;
            }
        }
    }

    Log.e(tag, "current : "+current);
    ArrayAdapter<String> adapter = new ArrayAdapter<>(activity,
android.R.layout.simple_list_item_1, bulan_array);
    splapalat.setAdapter(adapter);
    splapalat.setSelection(current);
    splapalat.setOnItemClickListener(new
AdapterView.OnItemClickListener() {
        @Override
        public void onItemClick(AdapterView<?> parent, View view, int
position, long id) {
            if (position > 0) {

```

```

1).getKodeAlat();
        kode_alat = dataAlatListArrayList.get(position -
        Log.e(tag, "onItemSelected alat : " + kode_alat);

        doGetDataMonitoring();
    } else {
        kode_alat = "-";

        dataMonitoringListArrayList = new ArrayList<>();
        doShowDataMonitoring("Silakan Pilih Alat...", 0);
    }
}

@Override
public void onNothingSelected(AdapterView<?> parent) {
}
});
}

private void doGetDataBulan() {
    if (!loading.isShowing()) {
        loading.show();
    }

    dataMonitoringBulanArrayList = new ArrayList<>();
    String base_url = UrlAkses.BASE_URL;
    String url_data = base_url + UrlAkses.URL_API;

    HashMap<String, String> params = new HashMap<>();

    Log.e(tag, "param url_data : " + url_data);

    Call<ResponseMonitoringBulan> call =
    ApiData.ApiService(url_data).getDataBulan(params);
    call.enqueue(new Callback<ResponseMonitoringBulan>() {
        @Override
        public void onResponse(Call<ResponseMonitoringBulan> call,
        Response<ResponseMonitoringBulan> response) {
            Log.e(tag, "url : " + response.raw().request().url());
            Log.e(tag, "response : " + new
            Gson().toJson(response.body()));

            String message = "";
            int success = 0;

            dataMonitoringBulanArrayList = new ArrayList<>();
            try{
                success = response.body().getSuccess();
                message = response.body().getMessage();

                if (response.isSuccessful() && success == 1) {
                    dataMonitoringBulanArrayList.addAll(response.body().getData());
                }
            } catch (Exception e){
                e.printStackTrace();
                message = "Terjadi Kesalahan #1";
            }
            doShowBulan(message, success);
        }

        @Override
        public void onFailure(Call<ResponseMonitoringBulan> call, Throwable
t) {
            t.printStackTrace();

            String message = "";
            int success = 0;
            doShowDataMonitoring(message, success);
        }
    });
}

private void doShowBulan(final String message, int success) {
    if (loading.isShowing()) {
        loading.dismiss();
    }

    ArrayList<String> bulan_array = new ArrayList<>();
    bulan_array.add("Pilih Bulan");

    int current = 0;

```

```

int size = dataMonitoringBulanArrayList.size();
for (int i = 0; i < size; i++) {

    String sp = dataMonitoringBulanArrayList.get(i).getNamabulan() + "
" + dataMonitoringBulanArrayList.get(i).getTahun();
    String sp2 = dataMonitoringBulanArrayList.get(i).getBulan() + " " +
dataMonitoringBulanArrayList.get(i).getTahun();
    bulan_array.add(sp);

    String bulantahun = bulan+" "+tahun;

    Log.e(tag,"bulantahun : "+bulantahun+" | sp2 : "+sp2);
    if(bulantahun.equalsIgnoreCase("- -")){
        current=1;
    }else{
        if(bulantahun.equalsIgnoreCase(sp2)){
            current=i+1;
        }
    }
}

ArrayAdapter<String> adapter = new ArrayAdapter<>(activity,
android.R.layout.simple_list_item_1, bulan_array);
splapbulan.setAdapter(adapter);
splapbulan.setSelection(current);
splapbulan.setOnItemClickListener(new
AdapterView.OnItemClickListener() {
@Override
public void onItemClick(AdapterView<?> parent, View view, int
position, long id) {
    if (position > 0) {
        bulan = dataMonitoringBulanArrayList.get(position -
1).getBulan();
        tahun = dataMonitoringBulanArrayList.get(position -
1).getTahun();
        Log.e(tag, "onItemSelected bulan : " + bulan + " " +
tahun);

        doGetDataMonitoring();
    } else {
        bulan = "-";
        tahun = "-";

        dataMonitoringListArrayList = new ArrayList<>();
        doShowDataMonitoring("Silakan Pilih Bulan...",0);
    }
}

@Override
public void onNothingSelected(AdapterView<?> parent) {
}
});
}

private void doGetDataMonitoring() {
    if (!loading.isShowing()) {
        loading.show();
    }

    dataMonitoringListArrayList = new ArrayList<>();
    String base_url = UrlAkses.BASE_URL;
    String url_data = base_url + UrlAkses.URL_API;

    HashMap<String, String> params = new HashMap<>();
    params.put("kode_alat", kode_alat);
    params.put("bulan", bulan);
    params.put("tahun", tahun);

    Log.e(tag, "param url_data : " + url_data);
    Log.e(tag, "param kode_alat : " + kode_alat);
    Log.e(tag, "param bulan : " + bulan);
    Log.e(tag, "param tahun : " + tahun);

    Call<ResponseMonitoringList> call =
ApiData.ApiService(url_data).getDataMonitoring(params);
    call.enqueue(new Callback<ResponseMonitoringList>() {
@Override
public void onResponse(Call<ResponseMonitoringList> call,
Response<ResponseMonitoringList> response) {
        Log.e(tag, "url : " + response.raw().request().url());
        Log.e(tag, "response : " + new
Gson().toJson(response.body()));

```

```

        String message = "";
        int success = 0;

        dataMonitoringListArrayList = new ArrayList<>();
        try{
            success = response.body().getSuccess();
            message = response.body().getMessage();

            if (response.isSuccessful() && success == 1) {
dataMonitoringListArrayList.addAll(response.body().getData());
            }
        }catch (Exception e){
            e.printStackTrace();
            message = "Terjadi Kesalahan #1";
        }

        doShowDataMonitoring(message,success);
    }

    @Override
    public void onFailure(Call<ResponseMonitoringList> call, Throwable
t) {

        t.printStackTrace();

        String message = "";
        int success = 0;
        doShowDataMonitoring(message,success);
    }
    });
}

private void doShowDataMonitoring(final String message, int success) {
    if (loading.isShowing()) {
        loading.dismiss();
    }

    String pesan = message;
    if(kode_alat.equalsIgnoreCase("-") && (bulan.equalsIgnoreCase("-") ||
tahun.equalsIgnoreCase("-"))){
        pesan = "Silakan pilih Alat dan Bulan";
    }

    GridLayoutManager layoutManager = new GridLayoutManager(activity, 1,
LinearLayoutManager.VERTICAL, false);
    rvlaplaporan.setHasFixedSize(true);
    rvlaplaporan.setNestedScrollingEnabled(true);
    rvlaplaporan.setLayoutManager(layoutManager);
    MonitoringItemAdapter adapter = new MonitoringItemAdapter(activity,
dataMonitoringListArrayList);
    rvlaplaporan.setAdapter(adapter);

    int size = dataMonitoringListArrayList.size();
    if (size > 0) {
        showNothing(false,pesan);
    } else {
        showNothing(true,pesan);
    }
}

private void showNothing(boolean isShow,String message){
    if(isShow){
        llnothing.setVisibility(View.VISIBLE);
        tvnothing.setText(message);
    }else{
        llnothing.setVisibility(View.GONE);
    }
}

@Override
public boolean onCreateOptionsMenu(Menu menu) {
    // Inflate the menu; this adds items to the action bar if it is
present.
    getMenuInflater().inflate(R.menu.act_refresh, menu);
    return true;
}

@Override
public boolean onOptionsItemSelected(MenuItem item) {
    // Handle action bar item clicks here. The action bar will
    // automatically handle clicks on the Home/Up button, so long
    // as you specify a parent activity in AndroidManifest.xml.

```

```

        int id = item.getItemId();

        //noinspection SimplifiableIfStatement
        if (id == android.R.id.home) {
            onBackPressed();
            return true;
        } else if (id == R.id.action_refresh) {
            doGetDataAlat();
            doGetDataBulan();
            return true;
        }

        return super.onOptionsItemSelected(item);
    }

    @Override
    public void onBackPressed() {
        finish();
    }
}

```

#### d. Alat Tambah Activity

```

package kampus.arum.jamurku;

import android.app.Activity;
import android.app.ProgressDialog;
import android.support.v7.app.AppCompatActivity;
import android.os.Bundle;
import android.support.v7.widget.GridLayoutManager;
import android.support.v7.widget.LinearLayoutManager;
import android.util.Log;
import android.view.Menu;
import android.view.MenuItem;
import android.view.View;
import android.widget.Button;
import android.widget.EditText;
import android.widget.Toast;

import com.google.gson.Gson;

import java.util.ArrayList;
import java.util.HashMap;

import kampus.arum.jamurku.adapter.AlatItemAdapter;
import kampus.arum.jamurku.model.parse.ApiData;
import kampus.arum.jamurku.model.parse.ResponseAlatInput;
import kampus.arum.jamurku.model.parse.ResponseAlatList;
import kampus.arum.jamurku.settings.UrlAkses;
import retrofit2.Call;
import retrofit2.Callback;
import retrofit2.Response;

public class AlatTambahActivity extends AppCompatActivity implements
View.OnClickListener {
    private String tag = getClass().getSimpleName();
    private Activity activity = this;

    private EditText ettmhkode;
    private EditText ettmhnama;
    private Button btmtambah;

    private ProgressDialog loading;

    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.layout_alat_tambah);
        getSupportActionBar().setDisplayHomeAsUpEnabled(true);

        ettmhkode = findViewById(R.id.ettmhkode);
        ettmhnama = findViewById(R.id.ettmhnama);
        btmtambah = findViewById(R.id.btmtambah);

        btmtambah.setOnClickListener(this);

        loading = new ProgressDialog(activity);
        loading.setMessage("Mohon Tunggu.....");
        loading.setIndeterminate(false);
        loading.setCancelable(false);
        //loading.show();
    }
}

```

```

@Override
public void onClick(View v) {
    switch (v.getId()) {
        case R.id.bttmbhtambah: {
            String kode = ettmbhkode.getText().toString();
            String nama = ettmbhnama.getText().toString();
            if (kode.isEmpty() || nama.isEmpty()) {
                Toast.makeText(activity, "Silakan Isi Data",
                    Toast.LENGTH_SHORT).show();
            } else {
                doPostDataAlat(kode, nama);
            }
            break;
        }
    }
}

private void doPostDataAlat(String kode_alat, String nama_alat) {
    if (!loading.isShowing()) {
        loading.show();
    }

    String base_url = UrlAkses.BASE_URL;
    String url_data = base_url + UrlAkses.URL_API;

    HashMap<String, String> params = new HashMap<>();
    params.put("kode_alat", kode_alat);
    params.put("nama_alat", nama_alat);

    Log.e(tag, "param url_data : " + url_data);
    Log.e(tag, "param kode_alat : " + kode_alat);
    Log.e(tag, "param nama_alat : " + nama_alat);

    Call<ResponseAlatInput> call =
        ApiData.ApiService(url_data).postDataAlat(params);
    call.enqueue(new Callback<ResponseAlatInput>() {
        @Override
        public void onResponse(Call<ResponseAlatInput> call,
            Response<ResponseAlatInput> response) {
            Log.e(tag, "url : " + response.raw().request().url());
            Log.e(tag, "response : " + new
                Gson().toJson(response.body()));

            String message = "";
            int success = 0;

            try {
                success = response.body().getSuccess();
                message = response.body().getMessage();
            } catch (Exception e) {
                e.printStackTrace();
                message = "Terjadi Kesalahan #1";
            }

            doShowDataAlat(message, success);
        }

        @Override
        public void onFailure(Call<ResponseAlatInput> call, Throwable t) {
            t.printStackTrace();

            String message = "";
            int success = 0;
            doShowDataAlat(message, success);
        }
    });
}

private void doShowDataAlat(final String message, int success) {
    if (loading.isShowing()) {
        loading.dismiss();
    }
    Toast.makeText(activity, message, Toast.LENGTH_SHORT).show();
    if (success==1) {
        ettmbhkode.setText("");
        ettmbhnama.setText("");

        ettmbhkode.requestFocus();
    }
}
}

```



```

@Override
public boolean onCreateOptionsMenu(Menu menu) {
    // Inflate the menu; this adds items to the action bar if it is
    present.
    getMenuInflater().inflate(R.menu.act_back, menu);
    return true;
}

@Override
public boolean onOptionsItemSelected(MenuItem item) {
    // Handle action bar item clicks here. The action bar will
    // automatically handle clicks on the Home/Up button, so long
    // as you specify a parent activity in AndroidManifest.xml.
    int id = item.getItemId();

    //noinspection SimplifiableIfStatement
    if (id == android.R.id.home) {
        onBackPressed();
        return true;
    }

    return super.onOptionsItemSelected(item);
}

@Override
public void onBackPressed() {
    finish();
}
}
}

```

## e. Layout Beranda

```

<?xml version="1.0" encoding="utf-8"?>
<LinearLayout xmlns:android="http://schemas.android.com/apk/res/android"
    xmlns:app="http://schemas.android.com/apk/res-auto"
    xmlns:tools="http://schemas.android.com/tools"
    android:layout_width="match_parent"
    android:layout_height="match_parent"
    app:layout_behavior="@string/appbar_scrolling_view_behavior"
    tools:context=".BerandaActivity"
    android:background="@color/colorPrimary"
    tools:showIn="@layout/app_bar_beranda">
    <android.support.v4.widget.SwipeRefreshLayout
        android:id="@+id/swipe"
        android:layout_width="wrap_content"
        android:layout_height="match_parent">
        <LinearLayout
            android:orientation="vertical"
            android:layout_width="match_parent"
            android:layout_height="match_parent">
            <ProgressBar
                android:background="@color/colorWhite"
                android:layout_marginTop="-4dp"
                android:layout_marginBottom="-4dp"
                android:indeterminate="true"
                android:id="@+id/loading"
                android:scaleY="2"
                style="?android:attr/progressBarStyleHorizontal"
                android:layout_width="match_parent"
                android:layout_height="wrap_content" />
            <LinearLayout
                android:gravity="center"
                android:layout_marginBottom="1dp"
                android:layout_marginLeft="1dp"
                android:layout_marginRight="1dp"
                android:layout_weight="1"
                android:background="@color/colorWhite"
                android:orientation="vertical"
                android:layout_width="match_parent"
                android:layout_height="wrap_content">
                <Spinner
                    android:id="@+id/spbrndalat"
                    android:layout_width="match_parent"
                    android:layout_height="wrap_content">
                </Spinner>
            </LinearLayout>
        </LinearLayout>
    <LinearLayout
        android:layout_weight="1"

```

```

        android:id="@+id/l11"
        android:padding="5dp"
        android:layout_margin="1dp"
        android:background="@android:color/white"
        android:gravity="center"
        android:orientation="horizontal"
        android:layout_width="match_parent"
        android:layout_height="wrap_content">
        <ImageView
            android:layout_marginRight="5dp"
            android:src="@drawable/icon_calendar"
            android:layout_gravity="center_vertical"
            android:layout_width="24dp"
            android:layout_height="24dp" />
        <TextView
            android:id="@+id/tvbrndwaktu"
            android:textStyle="bold"
            android:text="Rabu, 20 April 2019 - 15:40"
            android:layout_gravity="center_vertical"
            android:layout_width="wrap_content"
            android:layout_height="wrap_content" />
    </LinearLayout>
    <LinearLayout
        android:layout_weight="7"
        android:id="@+id/l12"
        android:padding="10dp"
        android:layout_margin="1dp"
        android:background="@android:color/white"
        android:gravity="center"
        android:orientation="vertical"
        android:layout_width="match_parent"
        android:layout_height="wrap_content">
        <LinearLayout
            android:layout_gravity="center_horizontal"
            android:orientation="horizontal"
            android:layout_width="wrap_content"
            android:layout_height="wrap_content">
            <ImageView
                android:layout_marginRight="5dp"
                android:src="@drawable/icon_temp"
                android:layout_gravity="center_vertical"
                android:layout_width="24dp"
                android:layout_height="24dp" />
            <TextView
                android:text="Suhu"
                android:textStyle="bold"
                android:textSize="25sp"
                android:layout_gravity="center_vertical"
                android:layout_width="wrap_content"
                android:layout_height="wrap_content" />
        </LinearLayout>
        <TextView
            android:id="@+id/tvbrndsuhu"
            android:text="30\u00B0C"
            android:textStyle="bold"
            android:textSize="80sp"
            android:layout_gravity="center_horizontal"
            android:layout_width="wrap_content"
            android:layout_height="wrap_content" />
    </LinearLayout>
    <LinearLayout
        android:layout_weight="2"
        android:id="@+id/l13"
        android:orientation="horizontal"
        android:layout_width="match_parent"
        android:layout_height="wrap_content">
        <LinearLayout
            android:layout_weight="1"
            android:padding="10dp"
            android:layout_margin="1dp"
            android:background="@android:color/white"
            android:gravity="center"
            android:orientation="vertical"
            android:layout_width="wrap_content"
            android:layout_height="match_parent">
            <LinearLayout
                android:layout_marginBottom="5dp"
                android:layout_gravity="center_horizontal"
                android:orientation="horizontal"
                android:layout_width="wrap_content"
                android:layout_height="wrap_content">
                <ImageView
                    android:layout_marginRight="5dp"
                    android:src="@drawable/icon_humidity"

```

```

        android:layout_gravity="center_vertical"
        android:layout_width="24dp"
        android:layout_height="24dp" />
<TextView
    android:textStyle="bold"
    android:text="Kelembaban"
    android:layout_gravity="center_vertical"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content" />
</LinearLayout>
<TextView
    android:id="@+id/tvbrndkelembaban"
    android:text="90%"
    android:textStyle="bold"
    android:textSize="40sp"
    android:layout_gravity="center_horizontal"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content" />
</LinearLayout>
<LinearLayout
    android:visibility="gone"
    android:background="@android:color/white"
    android:layout_margin="1dp"
    android:padding="10dp"
    android:gravity="center"
    android:layout_weight="1"
    android:layout_gravity="center_horizontal"
    android:orientation="vertical"
    android:layout_width="wrap_content"
    android:layout_height="match_parent">
    <LinearLayout
        android:layout_marginBottom="5dp"
        android:layout_gravity="center_horizontal"
        android:orientation="horizontal"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content">
        <ImageView
            android:layout_marginRight="5dp"
            android:src="@drawable/icon_press"
            android:layout_gravity="center_vertical"
            android:layout_width="24dp"
            android:layout_height="24dp" />
        <TextView
            android:text="Tekanan"
            android:layout_gravity="center_vertical"
            android:layout_width="wrap_content"
            android:layout_height="wrap_content" />
    </LinearLayout>
    <TextView
        android:text="10 psi"
        android:textSize="20sp"
        android:textStyle="bold"
        android:layout_gravity="center_horizontal"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content" />
</LinearLayout>
<LinearLayout
    android:visibility="gone"
    android:background="@android:color/white"
    android:layout_margin="1dp"
    android:padding="10dp"
    android:gravity="center"
    android:layout_weight="1"
    android:layout_gravity="center_horizontal"
    android:orientation="vertical"
    android:layout_width="wrap_content"
    android:layout_height="match_parent">
    <LinearLayout
        android:layout_marginBottom="5dp"
        android:layout_gravity="center_horizontal"
        android:orientation="horizontal"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content">
        <ImageView
            android:layout_marginRight="5dp"
            android:src="@drawable/icon_light"
            android:layout_gravity="center_vertical"
            android:layout_width="24dp"
            android:layout_height="24dp" />
        <TextView
            android:text="Cahaya"
            android:layout_gravity="center_vertical"
            android:layout_width="wrap_content"
            android:layout_height="wrap_content" />

```

```

        </LinearLayout>
        <TextView
            android:text="2500 Lux"
            android:textSize="20sp"
            android:textStyle="bold"
            android:layout_gravity="center_horizontal"
            android:layout_width="wrap_content"
            android:layout_height="wrap_content" />
    </LinearLayout>
    <LinearLayout
        android:layout_weight="4"
        android:id="@+id/l14"
        android:padding="10dp"
        android:layout_margin="1dp"
        android:background="@android:color/white"
        android:gravity="center"
        android:orientation="vertical"
        android:layout_width="wrap_content"
        android:layout_height="match_parent">
        <LinearLayout
            android:layout_marginBottom="5dp"
            android:layout_gravity="center_horizontal"
            android:orientation="horizontal"
            android:layout_width="wrap_content"
            android:layout_height="wrap_content">
            <ImageView
                android:layout_marginRight="5dp"
                android:src="@drawable/icon_health"
                android:layout_gravity="center_vertical"
                android:layout_width="24dp"
                android:layout_height="24dp" />
            <TextView
                android:textStyle="bold"
                android:text="Kondisi"
                android:layout_gravity="center_vertical"
                android:layout_width="wrap_content"
                android:layout_height="wrap_content" />
        </LinearLayout>
        <TextView
            android:id="@+id/tvbrndkondisi"
            android:text="Baik"
            android:textStyle="bold"
            android:textSize="40sp"
            android:layout_gravity="center_horizontal"
            android:layout_width="wrap_content"
            android:layout_height="wrap_content" />
    </LinearLayout>
</LinearLayout>
</android.support.v4.widget.SwipeRefreshLayout>
</LinearLayout>

```

## f. Layout Menu

```

<?xml version="1.0" encoding="utf-8" ?>
<android.support.v4.widget.DrawerLayout
    xmlns:android="http://schemas.android.com/apk/res/android"
    xmlns:app="http://schemas.android.com/apk/res-auto"
    xmlns:tools="http://schemas.android.com/tools"
    android:id="@+id/drawer_layout"
    android:layout_width="match_parent"
    android:layout_height="match_parent"
    android:fitsSystemWindows="true"
    tools:openDrawer="start">

    <!--menggunakan layout lain-->
    <include
        layout="@layout/app_bar_beranda"
        android:layout_width="match_parent"
        android:layout_height="match_parent" />

    <android.support.design.widget.NavigationView
        android:id="@+id/nav_view"
        android:layout_width="wrap_content"
        android:layout_height="match_parent"
        android:layout_gravity="start"
        android:fitsSystemWindows="true"
        app:headerLayout="@layout/nav_header_beranda"
        app:menu="@menu/nav_beranda" />

```

```
</android.support.v4.widget.DrawerLayout>
```

## g. Layout Alat List

```
<?xml version="1.0" encoding="utf-8" ?>
<RelativeLayout xmlns:android="http://schemas.android.com/apk/res/android"
    xmlns:app="http://schemas.android.com/apk/res-auto"
    xmlns:tools="http://schemas.android.com/tools"
    android:layout_width="match_parent"
    android:layout_height="match_parent"
    android:orientation="vertical"
    android:background="@color/colorPrimary"
    tools:context=".AlatListActivity">
    <LinearLayout
        android:orientation="vertical"
        android:layout_width="match_parent"
        android:layout_height="wrap_content">
        <android.support.v7.widget.RecyclerView
            android:id="@+id/rvalatlist"
            android:layout_marginTop="2dp"
            android:layout_width="match_parent"
            android:layout_height="wrap_content">

            </android.support.v7.widget.RecyclerView>
            <include layout="@layout/content_nothing" />
        </LinearLayout>
        <android.support.design.widget.FloatingActionButton
            android:id="@+id/fab"
            android:layout_width="wrap_content"
            android:layout_height="wrap_content"
            android:layout_alignParentBottom="true"
            android:layout_alignParentRight="true"
            android:layout_margin="@dimen/fab_margin"
            android:backgroundTint="@android:color/white"
            android:src="@drawable/ic_nav_alat_tambah_primary_24dp" />
    </RelativeLayout>
```

## h. Layout Laporan

```
<?xml version="1.0" encoding="utf-8" ?>
<RelativeLayout xmlns:android="http://schemas.android.com/apk/res/android"
    xmlns:app="http://schemas.android.com/apk/res-auto"
    xmlns:tools="http://schemas.android.com/tools"
    android:layout_width="match_parent"
    android:layout_height="match_parent"
    android:orientation="vertical"
    android:background="@color/colorPrimary"
    tools:context=".LaporanActivity">
    <LinearLayout
        android:layout_marginBottom="-30dp"
        android:layout_alignParentTop="true"
        android:layout_above="@+id/llbot"
        android:id="@+id/lltop"
        android:orientation="vertical"
        android:layout_width="match_parent"
        android:layout_height="wrap_content">

        <LinearLayout
            android:layout_marginTop="4dp"
            android:layout_marginBottom="4dp"
            android:layout_marginLeft="2dp"
            android:layout_marginRight="2dp"
            android:orientation="horizontal"
            android:layout_width="match_parent"
            android:layout_height="wrap_content">
            <LinearLayout
                android:layout_marginRight="6dp"
                android:layout_weight="1"
                android:background="@color/colorWhite"
                android:orientation="vertical"
                android:layout_width="wrap_content"
                android:layout_height="wrap_content">
                <Spinner
                    android:id="@+id/splapalat"
                    android:layout_width="match_parent"
                    android:layout_height="wrap_content">
                </Spinner>
            </LinearLayout>
        </LinearLayout>
    </RelativeLayout>
```

```

</LinearLayout>

<LinearLayout
    android:layout_weight="3"
    android:background="@color/colorWhite"
    android:orientation="vertical"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content">
    <Spinner
        android:id="@+id/splapbulan"
        android:layout_width="match_parent"
        android:layout_height="wrap_content">

        </Spinner>
    </LinearLayout>
</LinearLayout>
<android.support.v7.widget.RecyclerView
    android:id="@+id/rvlaplaporan"
    android:layout_width="match_parent"
    android:layout_height="wrap_content">

</android.support.v7.widget.RecyclerView>

<include layout="@layout/content_nothing" />
</LinearLayout>

<LinearLayout
    android:layout_alignParentBottom="true"
    android:id="@+id/llbot"
    android:orientation="vertical"
    android:layout_width="match_parent"
    android:layout_height="wrap_content">
    <include layout="@layout/item_laporan_legend" />
</LinearLayout>
</RelativeLayout>

```

## i. Layout Alat Tambah

```

<?xml version="1.0" encoding="utf-8" ?>
<LinearLayout xmlns:android="http://schemas.android.com/apk/res/android"
    xmlns:app="http://schemas.android.com/apk/res-auto"
    xmlns:tools="http://schemas.android.com/tools"
    android:layout_width="match_parent"
    android:layout_height="match_parent"
    android:orientation="vertical"
    tools:context=".AlatTambahActivity">

    <EditText
        android:hint="Kode Alat"
        android:id="@+id/ettmbhkode"
        android:inputType="textCapCharacters"
        android:layout_margin="10dp"
        android:layout_width="match_parent"
        android:layout_height="wrap_content" />

    <EditText
        android:hint="Nama Alat"
        android:id="@+id/ettmbhnama"
        android:inputType="textCapWords"
        android:layout_margin="10dp"
        android:layout_width="match_parent"
        android:layout_height="wrap_content" />

    <Button
        android:text="Tambah Alat"
        style="@style/Widget.AppCompat.Button.Colored"
        android:id="@+id/bttmbhtambah"
        android:layout_margin="10dp"
        android:layout_width="match_parent"
        android:layout_height="wrap_content" />
</LinearLayout>

```

## 2. Koding Arduino

```
/*
```

Bosch XDK IOT program by Singapore Polytechnic

```

*/

#include "Timer.h"
#include <LiquidCrystal.h>
#include <avr/wdt.h>

#define LOOP_DELAY 15      //in min
#define LOOP_SEND_SMS 360  //in min
#define HUMIDITY_THRESH 70

#define MODEM_AGE 30      //in sec

//IOT VAR
const String kode_alat = "MD001"; //kode alat

//AT serial
String ATString = "";      // a string to hold incoming data
boolean ATComplete = false; // whether the string is complete
unsigned int ATage = 8;

//XDK Serial
String XDKString = "";
boolean XDKComplete = false;
String tmpStr = "";
String dataStr[4];

//IO
LiquidCrystal lcd( A15, A14, A13, A12, 5, 4);
const byte interruptPinBagus = 2;
const byte interruptPinBuruk = 3;
const byte interruptPinMulai = 21;

```

```

//Global Var
String inputString = "";
boolean bagusUpdate = false;
boolean burukUpdate = false;
boolean mulaiUpdate = false;
boolean firstUpdate = false;
volatile byte stateBagus = LOW;
volatile byte stateBuruk = LOW;
volatile byte stateMulai = LOW;
int humidity = 0;
unsigned int loop_num = 0;

//Global Object
Timer tAT;
Timer tXDK;
Timer tSMS;

void setup() {
  //LCD Init
  lcd.begin(16, 2);          // start the library
  lcd.setCursor(0, 0);
  lcd.print("  SP & UMY  ");
  lcd.setCursor(0, 1);
  lcd.print("  Shroom Sense ");

  //i/o config
  pinMode(12, OUTPUT); //gsm power pin
  pinMode(interruptPinBagus, INPUT_PULLUP);
  pinMode(interruptPinBuruk, INPUT_PULLUP);
  pinMode(interruptPinMulai, INPUT_PULLUP);
}

```



```

// initialize serial:
Serial.begin(9600);//Debug console
Serial1.begin(19200);

//init variables
//for(int i = 0 ; i< HUMIDITY_HISTORY ; i++)
humidity_history[i] = 100;
XDKString.reserve(200);
ATString.reserve(200);
inputString.reserve(200);

//Timer config
tAT.every(MODEM_AGE * 1000, checkModem,0);
tXDK.every(LOOP_DELAY * 60000, sendXDK,0);

wdt_enable(WDTO_8S);

//Serial.println("Starting ...");
}

void checkModem()
{
  Serial.print("ATE0\r");
  if (ATage++ > 10)
  {
    turnOnGSM();
    wdt_reset();
    ATage = 5;
  }
}

void turnOnGSM() {

```

```

//GSM power on sequence
digitalWrite(12, HIGH);
delay(2000);
digitalWrite(12, LOW);
}

```

```

String parseString(String data, char separator, int index)
{
  int found = 0;
  int strIndex[] = { 0, -1 };
  int maxIndex = data.length() - 1;

  for (int i = 0; i <= maxIndex && found <= index; i++) {
    if (data.charAt(i) == separator || i == maxIndex) {
      found++;
      strIndex[0] = strIndex[1] + 1;
      strIndex[1] = (i == maxIndex) ? i + 1 : i;
    }
  }
  return found > index ? data.substring(strIndex[0], strIndex[1]) : "";
}

```

```

void sendXDK()
{
  //Serial.println("XDK Send" );
  for (int i = 0 ; i < 4 ; i++)
  {
    tmpStr = parseString(inputString, ';', i);
    dataStr[i] = tmpStr.substring(tmpStr.indexOf('=') + 1,
tmpStr.indexOf(','));

```

```

        //Serial.println(dataStr[i]);
    }
    humidity = atoi(dataStr[3].c_str());

    String kode_alat = "MD001" ;//kode alat
    //String gprsdata = "jamurku.com/api/v1/monitoringinput.php"
    "?kode_alat=" + kode_alat;"&kelembaban=" + (String)
    dataStr[3];"&suhu=" + dataStr[2].substring(0, 2) + "." +
    dataStr[2].substring(3, 5) + " darC " ;
    String kelembaban = dataStr[3];
    //String suhu = dataStr[2].substring(0, 2) + "." +
    dataStr[2].substring(3, 5) + " darC " ;
    String suhu = dataStr[2].substring(0, 2) + "." +
    dataStr[2].substring(3, 4);
    float fSuhu = dataStr[2].toFloat();
    String kondisi = "-";
    if (fSuhu <25 && fSuhu >15){
        kondisi = "Bagus";
    }else {
        kondisi = "Buruk";
    }
    String gprsdata =
    "jamurku.com/api/v1/monitoringinput.php?kode_alat="+kode_alat+
    "&kelembaban="+kelembaban+"&suhu="+suhu+"&kondisi="+kond
    isi;
    //Serial.println(gprsdata);

    //Serial.println("Suhu:" + dataStr[2].substring(0, 2) + "." +
    dataStr[2].substring(3, 5) + " darC " );
    lcd.setCursor(0, 0);
    lcd.print("Suhu:" + dataStr[2].substring(0, 2) + "." +
    dataStr[2].substring(3, 5) + " darC ");

```

```

lcd.setCursor(0, 1);
lcd.print("Lembab:" + dataStr[3] + " %    ");
//lcd.print("Humd:"+dataStr[3]+"% #"+(bagusOrburuk));
sendGPRS(gprsdata);
wdt_reset();
if (!firstUpdate) firstUpdate = true;
wdt_reset();
inputString = "";
}

void loop()
{
  wdt_reset();
  tAT.update();
  tXDK.update();
  tSMS.update();

  //GSM Modem
  if (ATComplete)
  {
    if (ATString != "\r\n")
    {
      Serial.print(ATString);
      if (ATString == "\r\nOK\r\n" || ATString == "OK\r\n")
      {
        //Serial.println("Modem OK");
        ATage = 0;
        if (!firstUpdate) sendXDK();
      }
      // else Serial.println("Modem X");
    }
    ATString = "";
  }
}

```

```

    ATComplete = false;
}

//XDK Data
if (XDKComplete)
{
    if (XDKString.startsWith("#"))
    {
        inputString = "";
        inputString = XDKString;
        //Serial.println(inputString);
        sendXDK();
    }
    XDKString = "";
    XDKComplete = false;
}

}

void sendGPRS(String data)
{
    Serial.print("AT+SAPBR=1,1\r\n");
    delay(2000);
    Serial.print("AT+HTTPIPINIT\r\n");
    delay(100);
    Serial.print("AT+HTTTPARA=\"URL\", \"\");
    Serial.print(data);
    Serial.print("\r\n");
    delay(100);
    Serial.print("AT+HTTTPARA=\"CID\",1\r\n");
    delay(100);
    Serial.print("AT+HTTTPACTION=0\r\n");
}

```

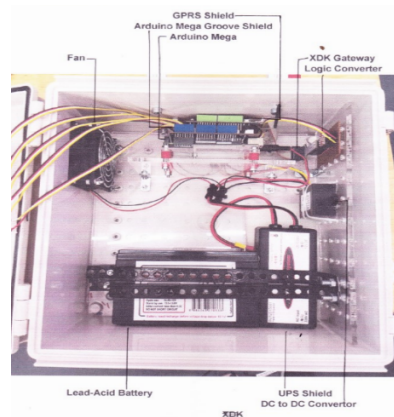
```

    delay(2000);
}
/*
SerialEvent occurs whenever a new data comes in the
hardware serial RX. This routine is run between each
time loop() runs, so using delay inside loop can delay
response. Multiple bytes of data may be available.
*/
void serialEvent() {
    while (Serial.available()) {
        // get the new byte:
        char inChar = (char)Serial.read();
        // add it to the ATString:
        ATString += inChar;
        if (inChar == '\n') {
            ATComplete = true;
        }
    }
}

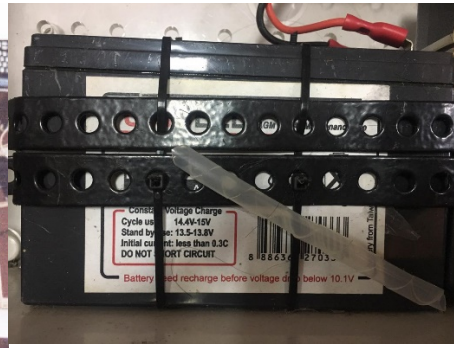
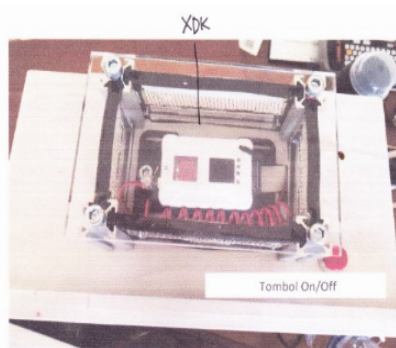
void serialEvent1() {
    while (Serial1.available()) {
        // get the new byte:
        char inChar = (char)Serial1.read();
        // add it to the XDKString:
        if (inChar != '\0' && inChar != '\n' && inChar != '\r')XDKString
+= inChar;
        if (inChar == '\n') {
            XDKComplete = true;
        }
    }
}
}

```

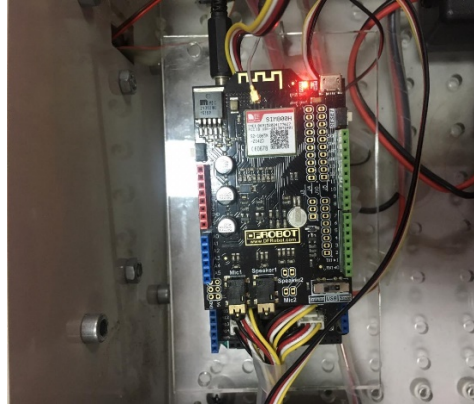
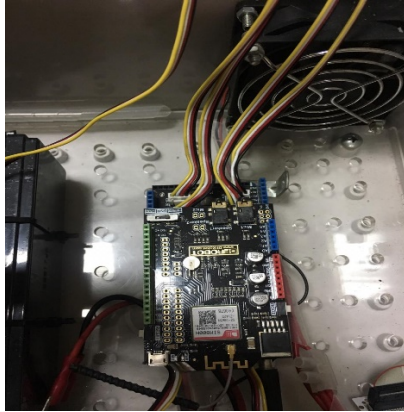
### 3. FOTO PENDUKUNG



Alat Shroom Sense & Komposisi Shroom Sense



Komponen Shroom Sense



Komponen Shroom Sense



Proses koding program