Lampiran

Lampiran 1 *Listing* Program

a. Program di *module.js*

```
// File name: Module.js // Created: 01.12.2005 // Copyright
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// InitModule function InitModule() { }
// ShutdownModule function ShutdownModule() { }
function chsword(a, b){
      textD = "";
      textM = "";
    var inputDosen = new Array();
    var inputMhs = new Array();
    var inputD = new Array();
    var inputM = new Array();
    var hasil;
      var total = [];
    var bufferrem = '';
      var bufferremNilai = 0;
      var nilaiJarakArray = 0;
    var reference = 0;
    inputDosen = a.split(".");
    inputMhs = b.split(".");
    buffer = [];
      buffer2 = [];
      lebihDosen = inputDosen.length - inputMhs.length;
      lebihMhs = inputMhs.length - inputDosen.length;

      if(inputMhs.length < inputDosen.length){
            for(i = 0; i < inputDosen.length; i++){
                  for(h = 0; h < lebihDosen; h++){
                        inputMhs.push(inputDosen[i]);
                  }
                  for(j = 0; j < inputMhs.length; j++){
                        hasil = levenshtein(inputDosen[i],
inputMhs[j]);
                        nilaiJarakArray += hasil;
                  }
                  total[i] = nilaiJarakArray;
                  nilaiJarakArray = 0;
                  for(k = 0; k < lebihDosen; k++){
                        inputMhs.pop();
                  }
            }
            var len = inputDosen.length;
            for (var i = len-1; i>=0; i--){
                  for(var j = 1; j<=i; j++){
                        if(total[j-1]>total[j]){
```

```
                              var tempNilai = total[j-1];
                              total[j-1] = total[j];
                              total[j] = tempNilai;

                              var temp = inputDosen[j-1];
                              inputDosen[j-1] = inputDosen[j];
                              inputDosen[j] = temp;
                        }
                  }
            }
            for(i = 0; i < lebihDosen; i++){
                  inputDosen.pop();
            }
            for(i=0;i<inputDosen.length;i++){
                  textD += inputDosen[i] + ".";
                  textM += inputMhs[i] + ".";
            }
      }
      else if(inputDosen.length < inputMhs.length){
            for(i = 0; i < inputMhs.length; i++){
                  for(h = 0; h < lebihMhs; h++){
                        inputDosen.push(inputMhs[i]);
                  }
                  for(j = 0; j < inputDosen.length; j++){
                        hasil = levenshtein(inputDosen[j],
inputMhs[i]);
                        nilaiJarakArray += hasil;
                  }
                  total[i] = nilaiJarakArray;
                  nilaiJarakArray = 0;
                  for(k = 0; k < lebihMhs; k++){
                        inputDosen.pop();
                  }
            }
            var len = inputMhs.length;
            for (var i = len-1; i>=0; i--){
                  for(var j = 1; j<=i; j++){
                        if(total[j-1]>total[j]){
                              var tempNilai = total[j-1];
                              total[j-1] = total[j];
                              total[j] = tempNilai;

                              var temp = inputMhs[j-1];
                              inputMhs[j-1] = inputMhs[j];
                              inputMhs[j] = temp;
                        }
                  }
            }
            for(i = 0; i < lebihMhs; i++){
                  inputMhs.pop();
            }
```

```
            for(i=0;i<inputMhs.length;i++){
                  textD += inputDosen[i] + ".";
                  textM += inputMhs[i] + ".";
            }
      }
      else if(inputDosen.length == inputMhs.length){
            for(i=0;i<inputDosen.length;i++){
                  textD += inputDosen[i] + ".";
                  textM += inputMhs[i] + ".";
            }
      }
      return [textD, textM];
}
```

b. Program menghitung score

```
function maksdist(text){
      var buffer = "";
      var loop = "TRUE";
      while(loop){
            buffer = text.replace('.','');
            if(buffer == text){
                  break;
            }
            text = buffer;
      }
      return buffer.length;
}

function score(a, b, c){
      arrayKunci = c.split(".");
      arrayD = a.split(".");
      arrayM = b.split(".");
      arrayD.pop();
      arrayM.pop();

      var total = 0;
      var hasilScore = 0;
      var totalkarakter = maksdist(c);

      for(d=0; d < arrayD.length; d++){
            mindist = 100;
                  dist = levenshtein(arrayD[d], arrayM[d]);
                  if(dist<mindist){
                        mindist = dist;
                  }
                  total += dist;
      }
            var score = ((totalkarakter -
total)/totalkarakter)*100;
            return score;
}
```

```
function levenshtein(a, b) {
  if(a.length === 0) return b.length;
  if(b.length === 0) return a.length;

  var matrix = [];
  var i;
  for(i = 0; i <= b.length; i++){
    matrix[i] = [i];
  }
  var j;
  for(j = 0; j <= a.length; j++){
    matrix[0][j] = j;
  }
  for(i = 1; i <= b.length; i++){
    for(j = 1; j <= a.length; j++){
      if(b.charAt(i-1) == a.charAt(j-1)){
        matrix[i][j] = matrix[i-1][j-1];
      } else {
        matrix[i][j] = Math.min(matrix[i-1][j-1] + 1,
                       Math.min(matrix[i][j-1] + 1,
                                matrix[i-1][j] + 1));
      }
    }
  }
  return matrix[b.length][a.length];
}
```

c. Program kata dasar

```
function mainSetence(words){
     if (words!=''){
          var otext = "";
          var wArray = words.split(' ');
          var aLength = wArray.length;
          for (w=0;w<aLength;w++){
               var itext = wArray[w];
               itext = itext.replace(/\s/g,'');
               itext = itext.toLowerCase();
               var ichar = itext.substr(0,1);
               var gchar = find_base(itext,ichar);
               if (gchar==""){otext+=itext + ' '}
               else {otext+=gchar + ' '}
          }
     }
     return otext;
}
function dasar_akhiran(text){
     var result = "";
     var buffer = "";
     var vari = text.substring(0,1);
     var load ="";
```

```
      try{
            load = window[vari]();
      } catch (e){result=text;return result;}
      var textL = text.length;
      var row = load.split(';');
      var dist = 100;
      var found = false;
      for (rb=0;rb<row.length;rb++){
            word = row[rb].split(',');
            word[0]=word[0].replace(/\s+/, "");
            if (word[0]===text){
                  result = word[0];//+','+word[1];
                  found = true;
                  break;
            }
            if ((!found)&&(rb==(row.length-1))){
                  tLength=text.length;
                  if ((text.substring(tLength-
1)=="i")&(text.substring(tLength-4)!="wati")){
                        text=text.substring(0,tLength-1);
                  result = text;
                        found = true;
                        break;
                  };
                  if ((text.substring(tLength-
2)=="an")&(text.substring(tLength-3)!="wan")
                        &(text.substring(tLength-3)!="kan")){
                        text=text.substring(0,tLength-2);
                  result = text;
                        found = true;
                        break;
                  };
                  if (text.substring(tLength-3)=="kan"){
                        text=text.substring(0,tLength-3);
                  result = text;
                        found = true;
                        break;
                  };
                  if (text.substring(tLength-2)=="ku"){
                        text=text.substring(0,tLength-2);
                  result = text;
                        found = true;
                        break;
                  };
                  if (text.substring(tLength-2)=="mu"){
                        text=text.substring(0,tLength-2);
                  result = text;
                        found = true;
                        break;
                  };
                  if (text.substring(tLength-3)=="nya"){
```

```
                        text=text.substring(0,tLength-3);
                    result = text;
                        found = true;
                        break;
                    };
                    if (text.substring(tLength-3)=="kah"){
                        text=text.substring(0,tLength-3);
                    result = text;
                        found = true;
                        break;
                    };
                    if (text.substring(tLength-3)=="pun"){
                        text=text.substring(0,tLength-3);
                    result = text;
                        found = true;
                        break;
                    };
                    if (text.substring(tLength-3)=="lah"){
                        text=text.substring(0,tLength-3);
                    result = text;
                        found = true;
                        break;
                    };
                    if (text.substring(tLength-3)=="tah"){
                        text=text.substring(0,tLength-3);
                    result = text;
                        found = true;
                        break;
                    };
                    if (text.substring(tLength-4)=="wati"){
                        text=text.substring(0,tLength-4);
                    result = text;
                        found = true;
                        break;
                    };
                    if (text.substring(tLength-3)=="wan"){
                        text=text.substring(0,tLength-3);
                    result = text;
                        found = true;
                        break;
                    };
                    if (text.substring(tLength-3)=="man"){
                        text=text.substring(0,tLength-3);
                    result = text;
                        found = true;
                        break;
                    };
                }
            }
            return result;
}
```

```
function find_base(text,vari){
      var result = "tidak ketemu";
      var buffer = "";
      try{
            load = window[vari]();
      } catch (e){result=text;return result;}
      var textL = text.length;
      var row = load.split(';');
      var dist = 100;
      var found = false;
      for (rb=0;rb<row.length;rb++){
            word = row[rb].split(',');
            word[0]=word[0].replace(/\s+/, "");
            if (word[0]===text){
                  result = word[0];//+','+word[1];
                  found = true;
                  break;
            }
            if ((!found)&&(rb==(row.length-1))){
                  if (text.substring(0,2)=="se"){
                        text=text.substring(2);
                        var fChar = text.substring(0,1);
                  var dasar = dasar_akhiran(text);
                        result = find(dasar,fChar);
                        break;
                  };
                  if (text.substring(0,3)=="per"){
                        text=text.substring(3);
                        var fChar = text.substring(0,1);
                  var dasar = dasar_akhiran(text);
                        result = find(dasar,fChar);
                        break;
                  };
                  if (text.substring(0,3)=="ter"){
                        text=text.substring(3);
                        var fChar = text.substring(0,1);
                  var dasar = dasar_akhiran(text);
                        result = find(dasar,fChar);
                        break;
                  };
                  if
((text.substring(0,2)=="be")&(text.substring(0,3)!="ber")){
                        text=text.substring(2);
                        var fChar = text.substring(0,1);
                  var dasar = dasar_akhiran(text);
                        result = find(dasar,fChar);
                        break;
                  };
                  if (text.substring(0,3)=="ber"){
                        text=text.substring(3);
                        var fChar = text.substring(0,1);
```

```
                    var dasar = dasar_akhiran(text);
                          result = find(dasar,fChar);
                          break;
                     };
                     if (text.substring(0,2)=="me"){
                          if (text.substring(2,4)=="mb"){
                               text=text.substring(3);
                               var fChar = text.substring(0,1);
                               var dasar = dasar_akhiran(text);
                               result = find(dasar,fChar);
                               break;
                          }
                          if (text.substring(2,4)=="mu"){
                               text="p"+text.substring(3);
                               var fChar = text.substring(0,1);
                               var dasar = dasar_akhiran(text);
                               result = find(dasar,fChar);
                               break;
                          }
                          if
((text.substring(2,4)=="ru")|(text.substring(2,4)=="ra")){
                               text="r"+text.substring(3);
                               var fChar = text.substring(0,1);
                               var dasar = dasar_akhiran(text);
                               result = find(dasar,fChar);
                               break;
                          }
                          if
((text.substring(2,5)=="maa")|(text.substring(2,5)=="mak")){
                               text=text.substring(2);
                               var fChar = text.substring(0,1);
                               var dasar = dasar_akhiran(text);
                               result = find(dasar,fChar);
                               break;
                          }
                          if (text.substring(2,4)=="ns"){
                               text=text.substring(3);
                               var fChar = text.substring(0,1);
                               var dasar = dasar_akhiran(text);
                               result = find(dasar,fChar);
                               break;
                          }
                          if
((text.substring(2,4)=="ni")|(text.substring(2,4)=="ne")){
                               text="t"+text.substring(3);
                               var fChar = text.substring(0,1);
                               var dasar = dasar_akhiran(text);
                               result = find(dasar,fChar);
                               break;
                          }
                          if (text.substring(2,4)=="li"){
```

```
                        text="l"+text.substring(3);
                        var fChar = text.substring(0,1);
                        var dasar = dasar_akhiran(text);
                        result = find(dasar,fChar);
                        break;
                    }
                    if (text.substring(2,6)=="mper"){
                        text=text.substring(6);
                        var fChar = text.substring(0,1);
                        var dasar = dasar_akhiran(text);
                        result = find(dasar,fChar);
                        break;
                    }
                    if (text.substring(2,6)=="mpel"){
                        text=text.substring(6);
                        var fChar = text.substring(0,1);
                        var dasar = dasar_akhiran(text);
                        result = find(dasar,fChar);
                        break;
                    }
                    if
((text.substring(2,5)=="mpr")|(text.substring(2,5)=="mpe")){
                        text=text.substring(3);
                        var fChar = text.substring(0,1);
                        var dasar = dasar_akhiran(text);
                        result = find(dasar,fChar);
                        break;
                    }
                    if (text.substring(2,5)=="nas"){
                        text="n"+text.substring(3);
                        var fChar = text.substring(0,1);
                        var dasar = dasar_akhiran(text);
                        result = find(dasar,fChar);
                        break;
                    }
                    if
((text.substring(2,4)=="nu")|(text.substring(2,4)=="na")
                        |(text.substring(2,4)=="no")){
                        text= "t" + text.substring(3);
                        var fChar = text.substring(0,1);
                        var dasar = dasar_akhiran(text);
                        result = find(dasar,fChar);
                        break;
                    }
                    if (text.substring(2,5)=="nya"){
                        text="s"+text.substring(4);
                        var fChar = text.substring(0,1);
                        var dasar = dasar_akhiran(text);
                        result = find(dasar,fChar);
                        break;
                    }
```

```
                        if
(((text.substring(2,4)=="ny")&(text.substring(2,5)!="nya"))

     |(text.substring(2,6)=="nyad")|(text.substring(2,6)=="
nyan")){
                              text= "s" + text.substring(4);
                              var fChar = text.substring(0,1);
                              var dasar = dasar_akhiran(text);
                              result = find(dasar,fChar);
                              break;
                        }
                        if
((text.substring(2,6)=="nyan")|(text.substring(2,6)=="manj")

     |(text.substring(2,5)=="maj")|(text.substring(2,6)=="m
and")){
                              text= text.substring(2);
                              var fChar = text.substring(0,1);
                              var dasar = dasar_akhiran(text);
                              result = find(dasar,fChar);
                              break;
                        }
                        if
((text.substring(2,4)=="nj")|(text.substring(2,4)=="nz")

     |(text.substring(2,4)=="nd")|(text.substring(2,4)=="nc
")
                              |(text.substring(2,5)=="ndr")){
                              text=text.substring(3);
                              var fChar = text.substring(0,1);
                              var dasar = dasar_akhiran(text);
                              result = find(dasar,fChar);
                              break;
                        }
                        if ((text.substring(2,6)=="nget")){
                              text=text.substring(5);
                              var fChar = text.substring(0,1);
                              var dasar = dasar_akhiran(text);
                              result = find(dasar,fChar);
                              break;
                        }
                        if (text.substring(2,8)=="ngemuk"){
                              text=text.substring(5);
                              var fChar = text.substring(0,1);
                              var dasar = dasar_akhiran(text);
                              result = find(dasar,fChar);
                              break;
                        }
                        if
((text.substring(2,5)=="ngh")|(text.substring(2,6)=="ngak")
```

```
      |(text.substring(2,5)=="ngg")|(text.substring(2,7)=="n
ging")|
                              (text.substring(2,5)=="ngi")|

      ((text.substring(2,5)=="nga")&(text.substring(2,6)!="n
gag")&(text.substring(2,7)!="ngand"))

      |((text.substring(2,5)=="ngo")&(text.substring(2,6)!="
ngor"))|(text.substring(2,5)=="ngu")){
                              text=text.substring(4);
                              var fChar = text.substring(0,1);
                              var dasar = dasar_akhiran(text);
                              result = find(dasar,fChar);
                              break;
                        }
                        if
((text.substring(2,5)=="nga")|(text.substring(2,5)=="ngi")&(
(text.substring(2,7)!="nging"))

      |(text.substring(2,5)=="ngr")|(text.substring(2,5)=="n
ge")|(text.substring(2,6)!="nget")

      |(text.substring(2,6)=="ngag")|(text.substring(2,7)=="
ngand")|(text.substring(2,6)=="ngor")){
                              text="k"+text.substring(4);
                              var fChar = text.substring(0,1);
                              var dasar = dasar_akhiran(text);
                              result = find(dasar,fChar);
                              break;
                        }
                        if
((text.substring(2,4)=="ma")&(text.substring(2,5)!="mak")){
                              text="p" + text.substring(3);
                              var fChar = text.substring(0,1);
                              result = find(text,fChar);
                              break;
                        }
                        else {
                              text=text.substring(2);
                              var fChar = text.substring(0,1);
                              result = find(text,fChar);
                              break;
                        }
                  };
                  // if
((text.substring(0,2)=="ke")&(text.substring(2,4)!="ked")&(t
ext.substring(2,4)!="kedu")){
                  if (text.substring(0,2)=="ke"){
                        if (text.substring(2,4)=="mb"){
                        text="kem" + text.substring(3);
```

```
                              var fchar = text.substring(0,1);
                              result = find(text,fchar);
                              break;
                        };
                        if (text.substring(2,4)=="rj"){
                              text="ker".substring(3);
                              var fchar = text.substring(0,1);
                              result = find(text,fchar);
                              break;
                        };
                        if (text.substring(2,4)=="na"){
                              text="ken".substring(3);
                              var fchar = text.substring(0,1);
                              result = find(text,fchar);
                              break;
                        };
                        if
((text.substring(2,4)=="du")|(text.substring(2,4)=="ti")|(te
xt.substring(2,4)=="em")

      |(text.substring(2,4)=="li")|(text.substring(2,4)=="en
")|(text.substring(2,4)=="tu")

      |(text.substring(2,4)=="de")|(text.substring(2,4)=="se
")){
                              text=text.substring(2);
                              var fchar = text.substring(0,1);
                              result = find(text,fchar);
                              break;
                        }
                  };
                  if (text.substring(0,2)=="di"){
                        text=text.substring(2);
                        var fChar = text.substring(0,1);
                        var dasar = dasar_akhiran(text);
                  result = find(dasar,fChar);
                        break;
                  };
                  else {
                        text = dasar_akhiran(text);
                        var fChar = text.substring(0,1);
                        var dasar = dasar_akhiran(text);
                  result = find(dasar,fChar);
                        break;
                  }
            }
            if (found){break;}
      }
      return result;
};
function find(text,vari){
```

```
      var result = "tidak ketemu";
      var buffer = "";
      try{
            load = window[vari]();
      } catch (e){result=text;}
      var textL = text.length;
      var row = load.split(';');
      var dist = 100;
      var found = false;
      for (rb=0;rb<row.length;rb++){
            word = row[rb].split(',');
            word[0]=word[0].replace(/\s+/, "");
            if (word[0]==text){
                  result = word[0];//+','+word[1];
                  found = true;
                  break;
            }
            if ((!found)&&(rb==(row.length-1))){
                  found=false;
                  for (col=1;col<text.length;col++){
                        findText = text.substr(0, text.length-
col);
                        for (nr=0;nr<row.length;nr++){
                              word = row[nr].split(',');
                              word[0]=word[0]
                              .replace(/\s+/, "");
                              if
(word[0].length>=findText.length){
                                    var compareText =
word[0].substr(0, findText.length);
                                    if
((compareText==findText)&&(!found)){
                                          result =
word[0];//+','+word[1];
                                          found=true;
                                          break;
                                    }
                              }
                              if(found){break;}
                        }
                        if(found){break;}
                  }
                  if(found){break;}
            }
            if (found){break;}
      }
      return result;
};
```

d. Program di *Slide Login*

```
var text = read_file();
```

```
array = text.split(',');
if(array[3] == 'VALID')
{
    OpenSlideById('SLIDE_14');
}
```

e. Program di tombol *Login*

```
var NIM = g_arVars['nim'];
var Name = g_arVars['name'];
var url = url_update();
var moduleID = callModuleID();
var uurl = url_validation();

if (NIM !== '' )
{
     var status =
create_newFile(moduleID,NIM,Name,'INVALID');
     if (status === 'OK')
        {
             alert('New data is saved');
             var text = read_file();
             var array = text.split(',');
             var json = "username="+array[1];
             validation(uurl, json,'OBJ_5');
        }
}
else
{
     alert('Enter NIM and First Name');
}
var data = read_file();
validation(url, data, "OBJ_5");
```

f. Program di tombol *Submit*

```
var text = g_arVars['inputDosen'];
var text2 = g_arVars['inputMhs'];

var hasil = chsword(text, text2);

var result = mainSetence(hasil[0]);
var result2 = mainSetence(hasil[1]);

var akhir = score(result, result2, text);

g_arVars['hasil']=akhir;
g_arVars['hasilMhs']=result2;
```