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APPENDICES

Appendix 1: Instrument for Heuristic Evaluation



UNIVERSITI SAINS ISLAM MALAYSIA
 جامعة العلوم الإسلامية الماليزية
 ISLAMIC SCIENCE UNIVERSITY OF MALAYSIA

Instrument for Heuristic Evaluation

Usability Test of a System That Tracks and Assesses Landmine Risks

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Dear respondent

All the information you provide will be kept confidential. Your name will not be stored with this questionnaire, and the information you provide will not be used for any other purpose. This questionnaire aims to rate your satisfaction with the overall usability of the prototype of a system that tracks and assesses landmine risks.

Feel free to contact me by email with regard to any queries.

Thank you for your time and assistance.

Section A: General Information

Please type (x) in between the brackets that represent your answer.

1. Gender:

[] Male

[] Female

2. Age:

() <25

() 25–35

() 36–49

() >50

3. Educational background: () Certificate () Diploma () Degree () Master () PhD
() others (please specify) _____

Section B: Overall Satisfaction

Instruction: Please put a check (✓) below the number that fits your response best and according to how much you agree or disagree with the following statements. Use the following scale:

1-Strongly disagree | 2-Disagree | 3-Fairly disagree | 4-Indecided | 5-Fairly agree |
6-Agree | 7-Strongly agree

Table 1: Questionnaire

Criteria	Scale					
	1	2	3	4	5	6
<i>A: Perceived Usefulness</i>						
1) The methods to how escape minefield provided by ERAA are sufficient to assist me in emergency.						
2) Using the ERAA would enable me to save my life and my family's life.						
3) Using the ERAA would enable me to reduce my tension from the risk of landmine.						
4) Using the ERAA would enable me to get the information of the landmine quickly.						
5) I find ERAA useful.						
6) The ERAA has some intelligent features that will help me in emergency.						

<i>Criteria</i>	<i>Scale</i>					
	1	2	3	4	5	6
7) The ERAA will give me some clarity on how to go forward with no sense of fear from the risk of landmine in my life.						
8) The ERAA app allows me to track my child's location anytime and anywhere.						
9) I could get sufficient information regarding the types of landmine.						
10) The ERAA provides helpful guidance to avoid the risk of landmine						
11) Learning to utilize ERAA App will help me to avoid the areas affected by landmine.						
<i>B: Perceived of Ease of Use</i>						
12) My interaction with the ERAA App is easy for me to understand.						
13) The ERAA interface is rigid and inflexible to interact with.						
14) Interacting with the ERAA App requires a lot of my mental effort.						
15) Overall, I find the ERAA App easy to use.						
16) The interaction within the ERAA App is understandable.						
17) The ERAA interface is flexible.						
18) Learning to operate ERAA App is easy.						
19) Interaction with the ERAA App is clear and understandable.						
20) It easy to interact with ERAA App by using mobile phone.						
21) It is easy to avoid minefield using the ERAA app.						
<i>C: User Satisfaction</i>						
22) I consider ERAA the most helpful app I have ever used.						
23) I am satisfied with the ERAA interface.						
24) I will recommend this app to my friends, family and colleagues.						
25) The ERAA interface is ideal.						
26) I feel very confident in using the ERAA app.						
27) I found it easy to share information about landmines using the ERAA app.						

<i>Criteria</i>	<i>Scale</i>					
	1	2	3	4	5	6
28) Overall, the on-the-spot information provided by ERAA has helped me make better decisions to avoid the risks of landmine.						
29) I am satisfied with the recommended solution.						
30) I am confident that I can make better decisions to avoid the risks of landmine during an emergency.						
31) I am very pleased with my experience in using the ERAA App.						
32) The ERAA app is capable of helping me make the right decision during an emergency.						
33) I feel that the problem in avoiding landmines has been solved.						
<i>D : Reliability</i>						
34) I can depend on the alerts issued by the ERAA app to avoid minefields.						
35) ERAA app can be relied to function properly.						
36) ERAA app provides the help that I need to avoid the minefields.						
37) ERAA App provides the advice that I require, to assist me in emergency.						
38) I can rely on the accuracy of ERAA maps to avoid the minefields.						

Thank you for your participation.

Appendix 2: Function for monitoring the changing of GSM Signal

```

// Checks if we have an network connection or not
- (void)testInternetConnection
{
    internetReachableFoo = [Reachability
reachabilityWithHostname:@"www.google.com"];

    // Internet is reachable
    internetReachableFoo.reachableBlock = ^(Reachability*reach)
    {
        // Update the UI on the main thread
        dispatch_async(dispatch_get_main_queue(), ^{
            NSLog(@"Yayyy, we have the interwebs!");
        });
    };

    // Internet is not reachable
    internetReachableFoo.unreachableBlock = ^(Reachability*reach)
    {
        // Update the UI on the main thread
        dispatch_async(dispatch_get_main_queue(), ^{
            NSLog(@"Someone broke the internet :(");
        });
    };

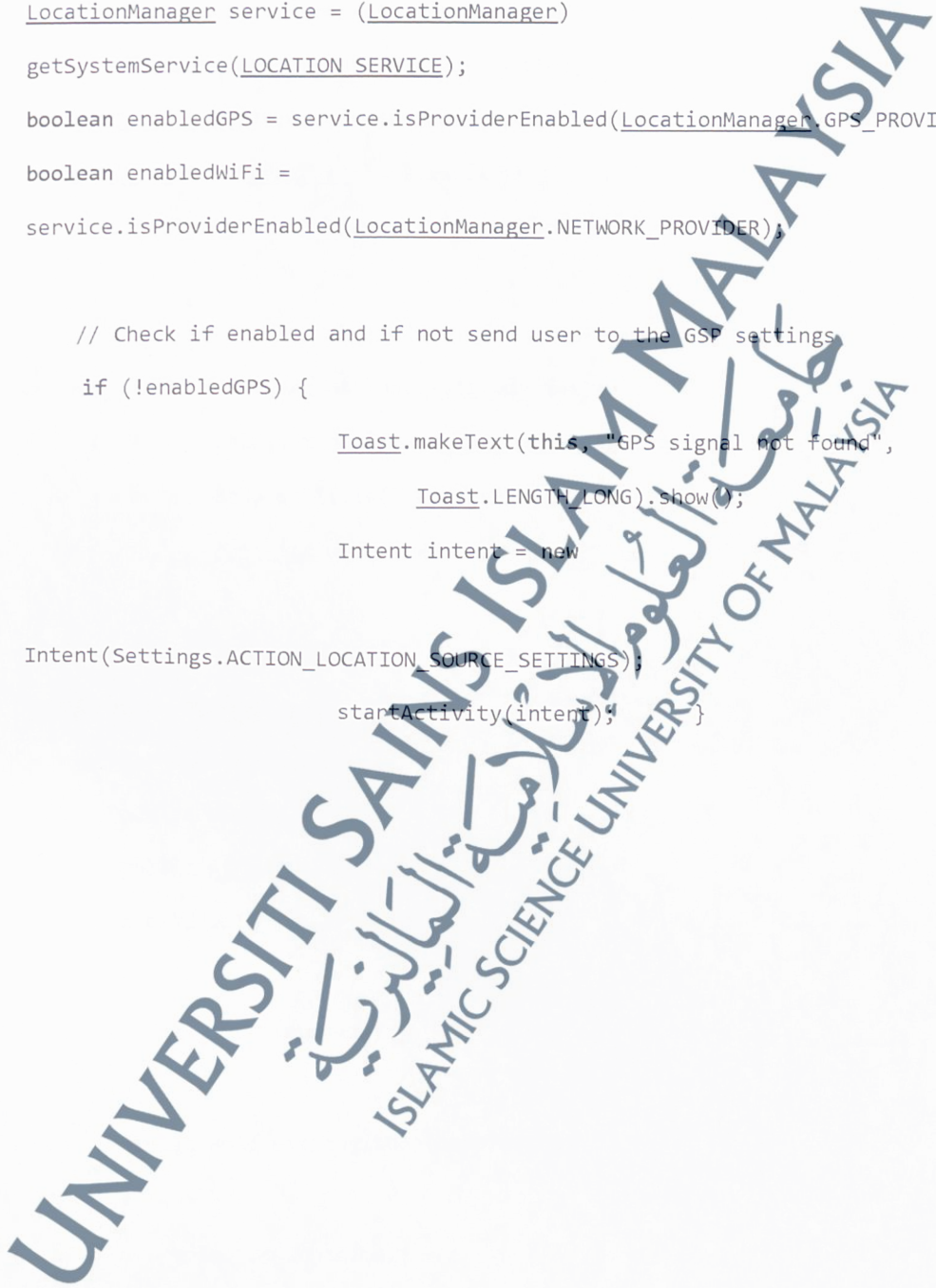
    [internetReachableFoo startNotifier];
}

```

Appendix 3: Function for monitoring the GPS Signal

```
// Checks if we have an GPS Signal or no
LocationManager service = (LocationManager)
getSystemService(LOCATION_SERVICE);
boolean enabledGPS = service.isProviderEnabled(LocationManager.GPS_PROVIDER);
boolean enabledWiFi =
service.isProviderEnabled(LocationManager.NETWORK_PROVIDER);

// Check if enabled and if not send user to the GSP settings
if (!enabledGPS) {
    Toast.makeText(this, "GPS signal not found",
        Toast.LENGTH_LONG).show();
    Intent intent = new
Intent(Settings.ACTION_LOCATION_SOURCE_SETTINGS);
startActivity(intent);
}
```



Appendix 4: Function for locate the users' position

```
// locate the users' position

protected void onCreate(Bundle savedInstanceState) {
    super.onCreate(savedInstanceState);
    setContentView(R.layout.activity_main_trackingactivity);
    position=new ArrayList<PositionClass>();
    for(int i=0;i<longitude.size();i++)
    {
        data=new PositionClass();
        data.setLatitude(latitude.get(i));
        data.setLongitude(longitude.get(i));
        data.setTitle(Title.get(i));
        position.add(data);
    }
    initilizeMap();
public class PositionClass {
    public double longitude;
    public double latitude;
    public String Title;
    public void setLatitude(double val)
    {
        this.latitude=val;
    }
    public void setLongitude(double val)
    {
        this.longitude=val;
    }
    public void setTitle(String text)
    {
        this.Title=text;
    }
}
}
```

Appendix 5: Function to calculate the distance between two points

```
// locate the users' position
Public double CalculationByDistance (double lat1, double
lon1, double lat2, double lon2) {
int kmInDec, meterInDec;double meter;
int Radius=6371; //radius of earth in Km
double dLat = Math.toRadians(lat2-lat1);
double dLon = Math.toRadians(lon2-lon1);
double a = Math.sin(dLat/2) * Math.sin(dLat/2) +
Math.cos(Math.toRadians(lat1)) *
Math.cos(Math.toRadians(lat2)) *
Math.sin(dLon/2) * Math.sin(dLon/2);
double c = 2 * Math.asin(Math.sqrt(a));
double valueResult= Radius*c;
double km=valueResult/1;
DecimalFormat newFormat = new
DecimalFormat("####");
kmInDec = Integer.valueOf(newFormat.format(km));
meter = valueResult%1000;
meterInDec = Integer.valueOf(newFormat.format(meter));
Log.i("Radius Value",""+valueResult+" KM
"+kmInDec+" Meter "+meterInDec);
return Radius * c;
```

Appendix 6: Accessing MYSQL JDBC driver on ERAA

```

import java.sql.Connection;
import java.sql.DriverManager;
import java.sql.ResultSet;
import java.sql.ResultSetMetaData;
import java.sql.Statement;
import android.app.Activity;
import android.os.Bundle;
import android.widget.TextView;

public class MysqlSample01Activity extends Activity {
    private static final String url =
"jdbc:mysql://<server>:<port>/<database>";

    private static final String user = "<username>";
    private static final String pass = "<password>";
    /** Called when the activity is first created. */
    @Override
    public void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.main);
        testDB();
    }
    public void testDB() {
        TextView tv = (TextView)this.findViewById(R.id.text_view);
        try {
            Class.forName("com.mysql.jdbc.Driver");
            Connection con = DriverManager.getConnection(url, user, pass);
            /* System.out.println("Databaseconnection success"); */

            String result = "Database connection success\n";

            Statement st = con.createStatement();

```

```

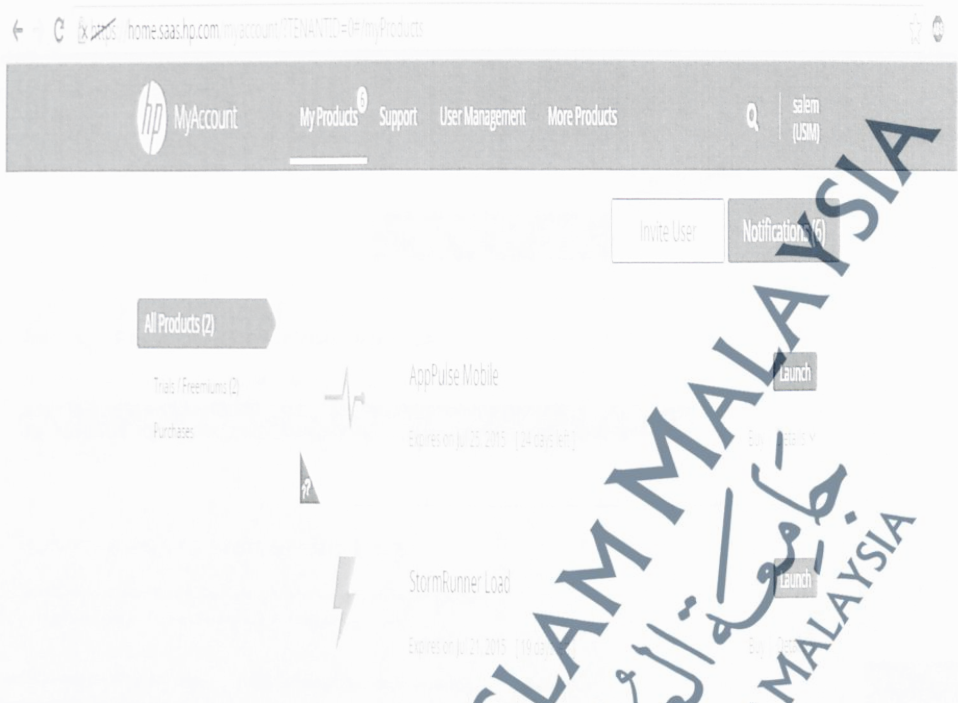
ResultSet rs = st.executeQuery("select * from table_name");
ResultSetMetaData rsmd = rs.getMetaData();
while(rs.next()) {
    result += rsmd.getColumnName(1) + ": " + rs.getInt(1) + "\n";
    result += rsmd.getColumnName(2) + ": " + rs.getString(2) + "\n";
    result += rsmd.getColumnName(3) + ": " + rs.getString(3) + "\n";
}
tv.setText(result);
}
catch(Exception e) {
    e.printStackTrace();
    tv.setText(e.toString());
}
}

```

Appendix 7: List of Experts in Expert Review

No.	Expert	Position	Gender	Company	Year of Experience
1.	A	Managing Director	Male	Libyan Mine Action Center	15
2.	B	Head of Department	Male	Libyan Mine Action Center	10

Appendix 8: Great an account on HP website



Appendix 9: Add New App



Appendix 10: Download and Extract the SDK

Advantage Banking created successfully! Application Key: pwl3i8kjke

- 1** Download and Extract the SDK

[Download SDK](#)
- 2** Add AppPulse Mobile to Your App Java 1.7 or higher & APK are required

Open a Windows command prompt and run the following command:

```
<unzipped sdk directory> \AppPulse_mobile.bat -appkey pwl3i8kjke <path to the APK file>
```

See Example
- 3** Run Your App to Start Seeing Data

Install the new APK on a mobile device (or emulator) and use your app. Now go explore your user experience in AppPulse Mobile!

How to Get Started on Android apps | Setup & Troubleshooting | Contact Us | [Close](#)

Appendix 11: Add HP App Pulse Mobile to ERA Android App (A)

```
C:\Windows\System32\cmd.exe
Microsoft Windows [Version 6.3.9600]
(c) 2013 Microsoft Corporation. All rights reserved.

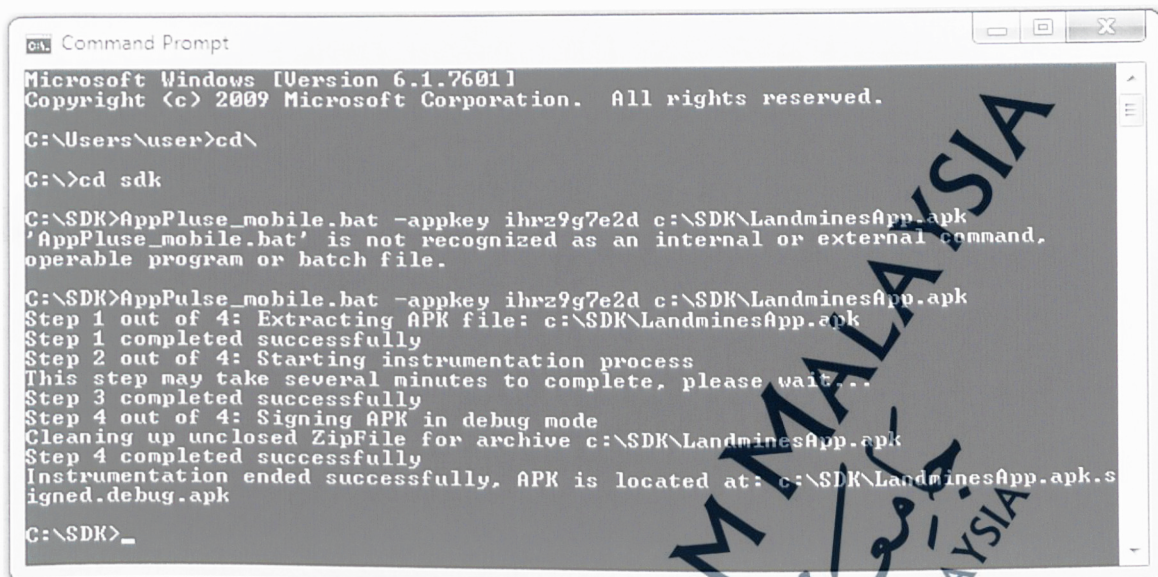
C:\Windows\system32>cd C:\ Path to the extracted SDK folder.

C:\Users\ > cd AppPulse_mobile_SDK_1.83_Android_Min

C:\Users\ > cd Downloads\AppDataPulse_mobile_SDK_1.83_Android_Min/AppPulse_mobile.bat -appkey 153cae4jqc c:\Advantage.apk
Step 1 out of 4: Extracting APK file: c:\Advantage.apk
Step 1 completed successfully
Step 2 out of 4: Starting instrumentation process
This step may take several minutes to complete, please wait...
Step 3 completed successfully
Step 4 out of 4: Signing APK in debug mode
Step 4 completed successfully
Instrumentation ended successfully. APK is located at: c:\Advantage.apk.signed.debug.apk
Your application may contain some HTML or JavaScript components, which are not yet supported. As a result some UI actions may not be measured.
Cleaning up unclosed ZipFile for archive c:\Advantage.apk

C:\Users\ > cd Downloads\AppDataPulse_mobile_SDK_1.83_Android_Min>
```

Appendix 12: Add HP App Pulse Mobile to ERAA Android App (B)



```
cmd - Command Prompt
Microsoft Windows [Version 6.1.7601]
Copyright (c) 2009 Microsoft Corporation. All rights reserved.

C:\Users\user>cd\

C:\>cd sdk

C:\SDK>AppPluse_mobile.bat -appkey ihrz9g7e2d c:\SDK\LandminesApp.apk
'AppPluse_mobile.bat' is not recognized as an internal or external command,
operable program or batch file.

C:\SDK>AppPulse_mobile.bat -appkey ihrz9g7e2d c:\SDK\LandminesApp.apk
Step 1 out of 4: Extracting APK file: c:\SDK\LandminesApp.apk
Step 1 completed successfully
Step 2 out of 4: Starting instrumentation process
This step may take several minutes to complete, please wait...
Step 3 completed successfully
Step 4 out of 4: Signing APK in debug mode
Cleaning up unclosed ZipFile for archive c:\SDK\LandminesApp.apk
Step 4 completed successfully
Instrumentation ended successfully, APK is located at: c:\SDK\LandminesApp.apk.s
igned.debug.apk

C:\SDK>_
```

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