

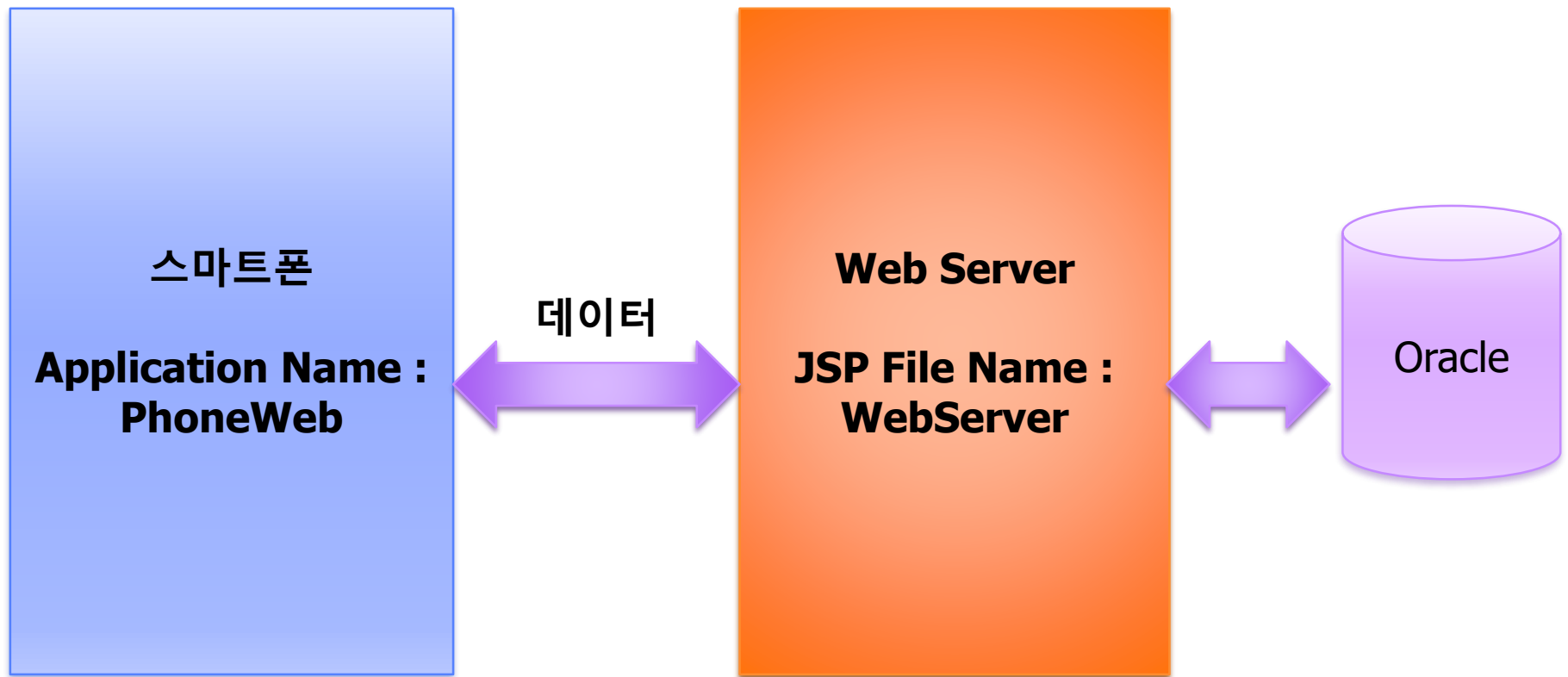


ANDROID와 WEB SERVER & ORACLE

안드로이드에서 웹 서버에 데이터 전송, 웹서버에서
Oracle 데이터베이스에 저장, 안드로이드 폰으로 다시
보내기



Smart Phone과 JSP & Oracle



Web서버와 데이터베이스연결



1. Eclipse에서 웹서버 프로그래밍
2. Ojdbc.jar 파일 세팅
3. JSP 파일 생성



```
1 <%@ page language="java" contentType="text/html; charset=EUC-KR"
2   pageEncoding="EUC-KR" import="java.sql.*"
3   import = "java.util.*"%>
4
5 <%
6   String recvMessage = "0";
7   String[] msg;
8   String SendMessage = null;
9   String TestData = "A001";
10  try{
11      recvMessage = request.getParameter("msg");
12
13      //DB 연결 //
14      Connection conn = null;
15      Statement stmt = null;
16      ResultSet rs = null;
17      String sql = null;
18
```

```

19     try{
20         Class.forName("oracle.jdbc.driver.OracleDriver");
21         conn = DriverManager.getConnection(
22             "jdbc:oracle:thin:@168.126.146.45:1521:orcl", "20170115", "990020");
23
24         try{
25             sql = "SELECT NAME FROM DBTEST WHERE ID = '" + TestData + "'";
26             stmt = conn.createStatement();
27             rs = stmt.executeQuery(sql);
28             while(rs.next()){
29                 SendMessage = rs.getString(1);
30             }
31             rs.close();
32             stmt.close();
33         }catch(Exception e){
34             System.out.println("오라클 Select 오류!");
35         }
36     }catch(Exception e){
37         System.out.println("오라클 연동 실패!");
38     }
39 }catch(Exception e){
40     System.out.println("서버 및 오라클 오류!");
41 }finally{
42     out.println("write Data:" + SendMessage + "!");
43 }
44 %>

```

열

데이터

제약 조건

권한 부여

통계

트리거

플래시백


중속성

세부 정보

분할 영역

인덱스

SQL







작업...

	COLUMN_NAME	DATA_TYPE	NULLABLE	DATA_DEFAULT	COLUMN_ID	COMMENTS
1	ID	VARCHAR2 (20 BYTE)	Yes	(null)	1	(null)
2	NAME	VARCHAR2 (20 BYTE)	Yes	(null)	2	(null)

Oracle

DBTEST

열

데이터

제약 조건

권한 부여

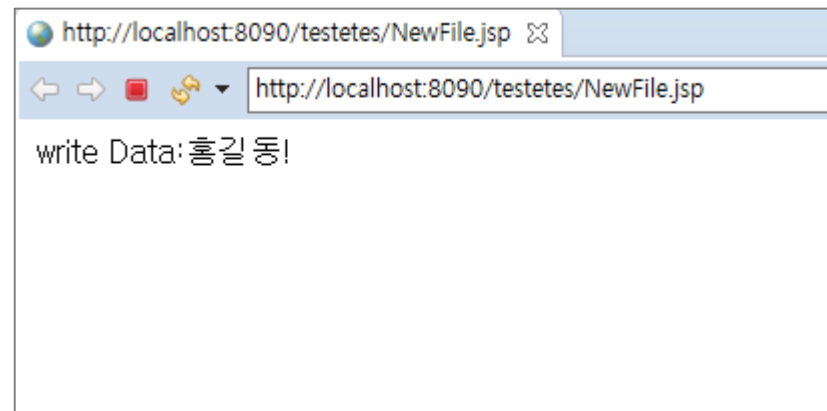
통계

트

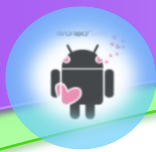
정렬...

필터:

	ID	NAME
1	A001	홍길동
2	A002	성춘향
3	A003	조장혁



(모바일 앱)프로젝트 만들기



Application name: `AndroidWebserverOracle`

Company Domain: `admid.example.com`

Project location: `C:\Android\StdWork\androidwebserver`

Target Android Devices

- Minimum SDK API 19이상

Add an activity to Mobile : `Empty Activity`

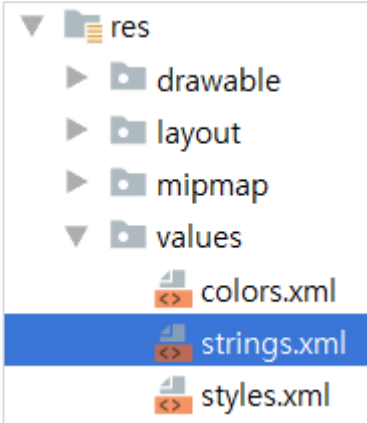
Customize the Activity

- Activity Name: `MainActivity`

- Layout Name: `activity_main`



res → values → strings.xml



웹서버 JSP경로로 변경

strings.xml x

Edit translations for all locales in the translations editor.

```
1 <resources>
2   <!-- app -->
3   <string name="app_name">Phone and WebServer</string>
4   <string name="server_url">http://192.168.21.220:8090/testetes/Newfile.jsp</string>
5
6   <!-- layout default -->
7   <string name="send_message">ID 조회 : </string>
8   <string name="send_message_input"> 조회 ID 입력</string>
9   <string name="send">요 청</string>
10  <string name="receive_message">조회된 사용자명 : </string>
11  <string name="receive_message_empty"> 조회된 이름이 없습니다.</string>
12  <string name="file_save">File Save</string>
13
14  <!-- toast message -->
15  <string name="send_message_empty">메시지를 입력하세요.</string>
16  <string name="file_empty">저장할 메시지가 없습니다.</string>
17
18  <!-- log filename -->
19  <string name="file_log_name">temp.log</string>
20
21 </resources>
```

```
1 <?xml version="1.0" encoding="utf-8"?>
2 <LinearLayout xmlns:android="http://schemas.android.com/apk/res/android"
3   xmlns:app="http://schemas.android.com/apk/res-auto"
4   xmlns:tools="http://schemas.android.com/tools"
5   android:layout_width="match_parent"
6   android:layout_height="match_parent"
7   android:orientation="vertical"
8   tools:context=".MainActivity">
9
10  <LinearLayout
11    android:layout_width="match_parent"
12    android:layout_height="wrap_content"
13    android:orientation="horizontal">
14
15    <TextView
16      android:layout_width="wrap_content"
17      android:layout_height="wrap_content"
18      android:text="@string/send_message" />
19
20    <EditText
21      android:id="@+id/et_message"
22      android:layout_width="match_parent"
23      android:layout_height="wrap_content"
24      android:hint="@string/send_message_input" />
25  </LinearLayout>
```

ID 조회: 조회 ID 입력

SEND

조회된 사용자명 :조회된 이름이 없습니다.

string.xml에 정의

```
26
27
28     <Button
29         android:id="@+id/btn_sendData"
30         android:layout_width="match_parent"
31         android:layout_height="wrap_content"
32         android:layout_margin="20dp"
33         android:text="Send" />
34
35     <LinearLayout
36         android:layout_width="match_parent"
37         android:layout_height="wrap_content"
38         android:orientation="horizontal">
39
40         <TextView
41             android:layout_width="wrap_content"
42             android:layout_height="wrap_content"
43             android:text="@string/receive_message" />
44
45         <TextView
46             android:id="@+id/tv_receive"
47             android:layout_width="match_parent"
48             android:layout_height="wrap_content"
49             android:text="@string/receive_message_empty" />
50     </LinearLayout>
```

보내는 메시지 : 보내는 메시지 입력

SEND

받은 메시지 : 받은 메시지가 없습니다.

string.xml에 정의

```
50
51 <LinearLayout
52     android:layout_width="wrap_content"
53     android:layout_height="wrap_content"
54     android:orientation="vertical"
55     android:layout_gravity="center">
56
57     <ProgressBar
58         android:id="@+id/progressBar"
59         android:layout_width="wrap_content"
60         android:layout_height="wrap_content"
61         android:visibility="invisible" />
62 </LinearLayout>
63
64 </LinearLayout>
```

보내는 메시지 : 보내는 메시지 입력

SEND

받은 메시지 : 받은 메시지가 없습니다.

```
MainActivity.java x
1 package com.example.phoneweb;
2
3 import android.os.AsyncTask;
4 import android.support.v7.app.AppCompatActivity;
5 import android.os.Bundle;
6 import android.view.View;
7 import android.widget.Button;
8 import android.widget.EditText;
9 import android.widget.ProgressBar;
10 import android.widget.TextView;
11 import android.widget.Toast;
12
13 import java.io.UnsupportedEncodingException;
14 import java.net.MalformedURLException;
15 import java.net.URL;
16 import java.net.URLEncoder;
17
```

추후 확인

```
17
18 public class MainActivity extends AppCompatActivity {
19     private EditText sendMessage;
20     private TextView receiveMessage;
21     private ProgressBar loadingBar;
22
23     @Override
24     protected void onCreate(Bundle savedInstanceState) {
25         super.onCreate(savedInstanceState);
26         setContentView(R.layout.activity_main);
27         sendMessage = findViewById(R.id.et_message);
28         receiveMessage = findViewById(R.id.tv_receive);
29         loadingBar = findViewById(R.id.progressBar);
30
31         HttpURLConnection connection;
32
33         Button send = findViewById(R.id.btn_sendData);
```

개체 변수

위젯 연결

```
34
35
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57
58

send.setOnClickListener(new Button.OnClickListener() {
    @Override
    public void onClick(View view) {
        // 전달할 메시지 없는 경우 예외 처리.
        if (sendMessage.getText().toString().length() == 0) {
            Toast.makeText(getApplicationContext(),
                getResources().getString(R.string.send_message_empty),
                Toast.LENGTH_SHORT).show();

            return;
        }
        URL url = null;
        try {
            String path = getResources().getString(R.string.server_url) + "?msg=";
            String query = URLEncoder.encode(sendMessage.getText().toString(), "UTF-8");
            url = new URL(path + query);
        } catch (MalformedURLException | UnsupportedEncodingException e) {
            e.printStackTrace();
            Toast.makeText(getApplicationContext(),
                e.getMessage(), Toast.LENGTH_SHORT).show();
        }
        new HttpConnection().execute(url);
    }
});
}
```

전송메시지 :
sendMessage.getText().toString()

```
59 private class HttpConnection extends AsyncTask<URL, Integer, String> {  
60  
61     @Override  
62     protected void onPreExecute() {  
63         super.onPreExecute();  
64         progressBar.setVisibility(View.VISIBLE);  
65     }  
66  
67     @Override  
68     protected String doInBackground(URL... urls) {  
69         String data = "";  
70         if (urls.length == 0) {  
71             return "URL is empty.";  
72         }  
73         try {  
74             RequestHttpURLConnection connection = new RequestHttpURLConnection();  
75             data = connection.request(urls[0]);  
76         } catch (Exception e) {  
77             data = e.getMessage();  
78         }  
79         return data;  
80     }  
81 }
```

프로그래스바 보이기

서버로 부터 전송된 데이터

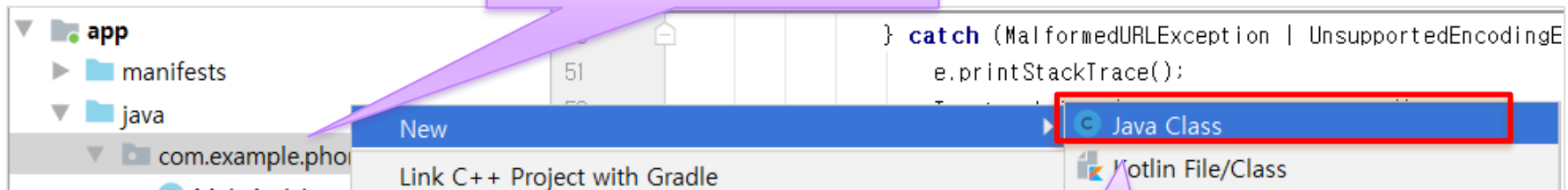

```
82  
83  
84  
85  
86  
87  
88  
89  
90  
91
```

```
    @Override  
    protected void onPostExecute(String data) {  
        super.onPostExecute(data);  
  
        progressBar.setVisibility(View.INVISIBLE);  
  
        receiveMessage.setText(data);  
    }  
}
```

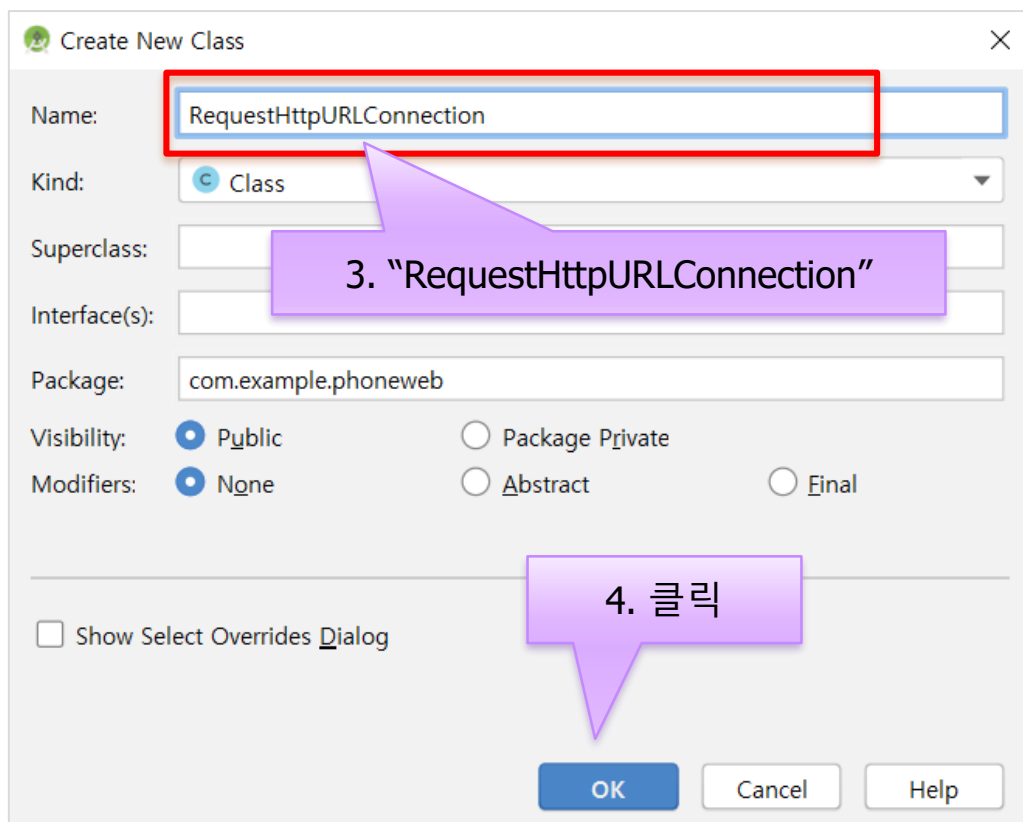
프로그래스바 숨이기

결과값 세팅

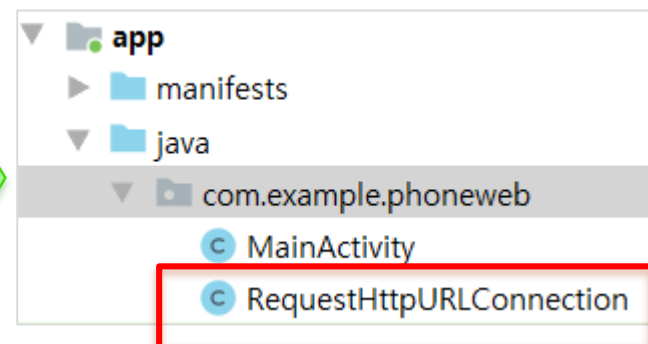
1. 오른쪽 마우스 클릭



2. "Java Class" 클릭

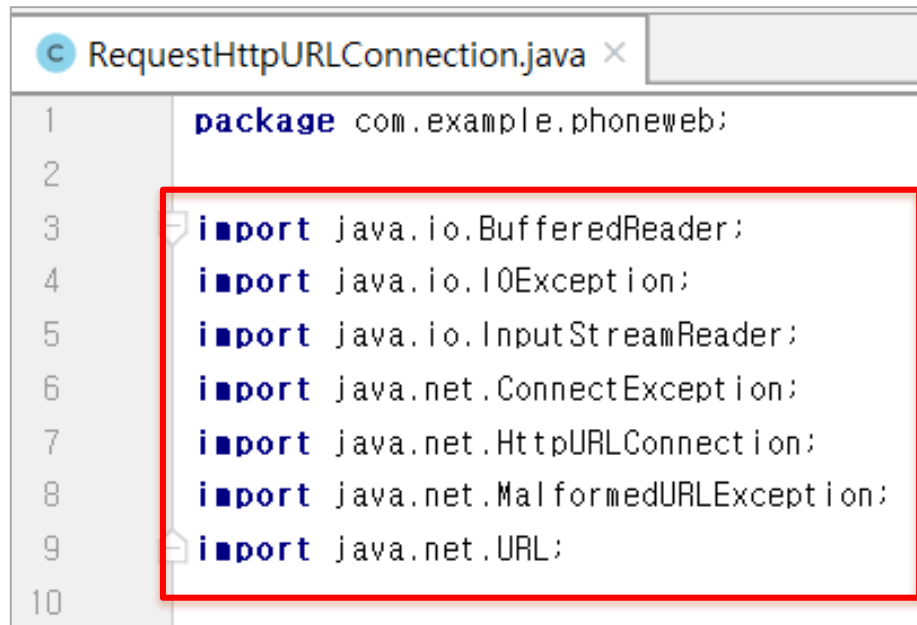


4. 클릭



RequestURLConnection.Java

19



```
RequestURLConnection.java x
1 package com.example.phoneweb;
2
3 import java.io.BufferedReader;
4 import java.io.IOException;
5 import java.io.InputStreamReader;
6 import java.net.ConnectException;
7 import java.net.HttpURLConnection;
8 import java.net.MalformedURLException;
9 import java.net.URL;
10
```

추후 확인

```
10
11 public class RequestURLConnection {
12
13     public String request(final URL url) {
14         HttpURLConnection urlConnection = null;
15         try {
16             urlConnection = (HttpURLConnection) url.openConnection();
17             urlConnection.setReadTimeout(3000);
18             urlConnection.setConnectTimeout(3000);
19             urlConnection.setRequestMethod("GET"); // URL 요청에 대한 메소드 설정 : GET/POST.
20             if (urlConnection.getResponseCode() != HttpURLConnection.HTTP_OK) {
21                 throw new ConnectException();
22             }
23             String page = "";
24             try (BufferedReader reader = new BufferedReader(
25                 new InputStreamReader(urlConnection.getInputStream(), charsetName: "UTF-8"))) {
26                 String line;
27                 while ((line = reader.readLine()) != null) {
28                     page += line;
29                 }
30             }
31         }
```

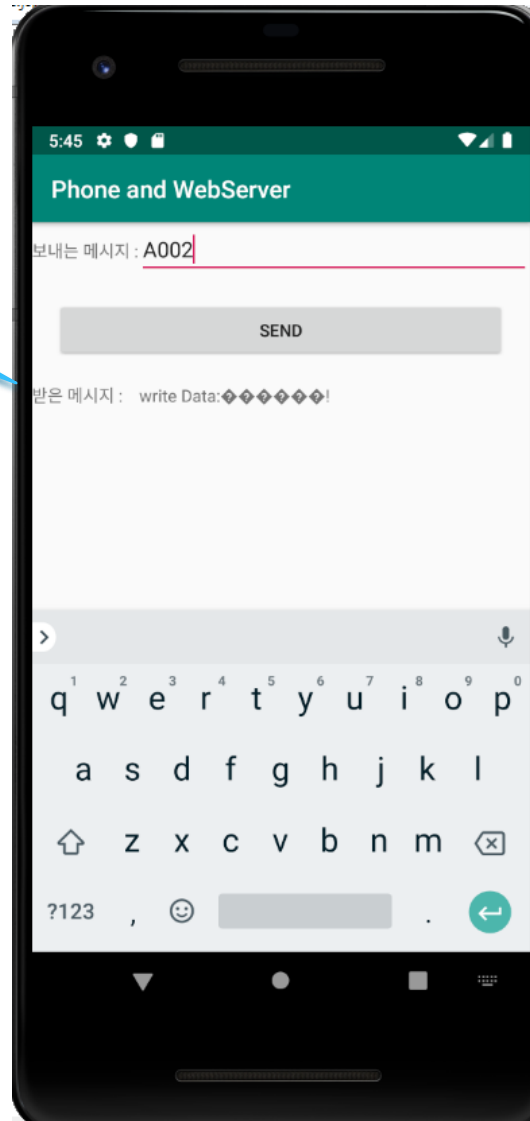
```
31  
32         return page;  
33     } catch (MalformedURLException e) {  
34         e.printStackTrace();  
35     } catch (IOException e) {  
36         e.printStackTrace();  
37     } finally {  
38         if (urlConnection != null) {  
39             urlConnection.disconnect();  
40         }  
41     }  
42  
43     return null;  
44 }  
45  
46
```



```
5 <%  
6 String recvMessage = "0";  
7 String[] msg;  
8 String SendMessage = null;  
9 //String TestData = "A001";  
10 try{  
11     recvMessage = request.getParameter("msg");  
12  
13     //DB 연결 //  
14     Connection conn = null;  
15     Statement stmt = null;  
16     ResultSet rs = null;  
17     String sql = null;  
18  
19     try{  
20         Class.forName("oracle.jdbc.driver.OracleDriver");  
21         conn = DriverManager.getConnection(  
22             "jdbc:oracle:thin:@168.126.146.45:1521:orcl", "20110175", "310020");  
23  
24         try{  
25             //sql = "SELECT NAME FROM DBTEST WHERE ID = '" + TestData + "'";  
26             sql = "SELECT NAME FROM DBTEST WHERE ID = '" + recvMessage + "'";  
27  
28             stmt = conn.createStatement();  
29             rs = stmt.executeQuery(sql);  
30             while(rs.next()){
```

코드 수정

입력 데이터에 따라 대응되는 결과 출력



Oracle		DBTEST	
열	데이터	제약 조건	권한 부
	ID	NAME	
1	A001	홍길동	
2	A002	성춘향	
3	A003	조장혁	

OJDBC 파일 추가

오른쪽 마우스 클릭 후
"Properties"

