Mobile Application Technology Assignment-1
20MCA097

GitHub Assignment Repository - https://github.com/gamble4846/MAC_2_Mobile_Application_Technology_Assignment-1.git

1) Create an android UI application to accept two numbers and then display the sum of the number using Button and EditText.

MainActivity

```
1. package com.example.assignment_1_mca_2_mat_sum_android;
2.
3. import androidx.appcompat.app.AppCompatActivity;
4.
5. import android.os.Bundle;
6. import android.text.TextUtils;
7. import android.view.View;
8. import android.widget.Button;
9. import android.widget.EditText;
10. import android.widget.TextView;
11. import android.widget.Toast;
12.
13. public class MainActivity extends AppCompatActivity {
14.
15.     EditText txtNumber1, txtNumber2;
16.     Button btnAddition;
17.     TextView tvAnswer;
18.
19.     int number1 = 0;
20.     int number2 = 0;
21.     @Override
22.     protected void onCreate(Bundle savedInstanceState) {
23.         super.onCreate(savedInstanceState);
24.         setContentView(R.layout.activity_main);
25.         getViews();
26.         btnAddition.setOnClickListener(AdditionButtonClick);
27.     }
28.
29.     public void ConvertingValues()
30.     {
31.         if(!TextUtils.isEmpty(txtNumber1.getText().toString())) {
32.             try {
33.                 number1 = Integer.parseInt(txtNumber1.getText().toString());
34.             } catch (NumberFormatException nfe) {
35.                 number1 = 0;
36.                 Toast myToast = Toast.makeText(this, "1st Number cannot be
    used as number default (0) will be used", Toast.LENGTH_LONG);
```

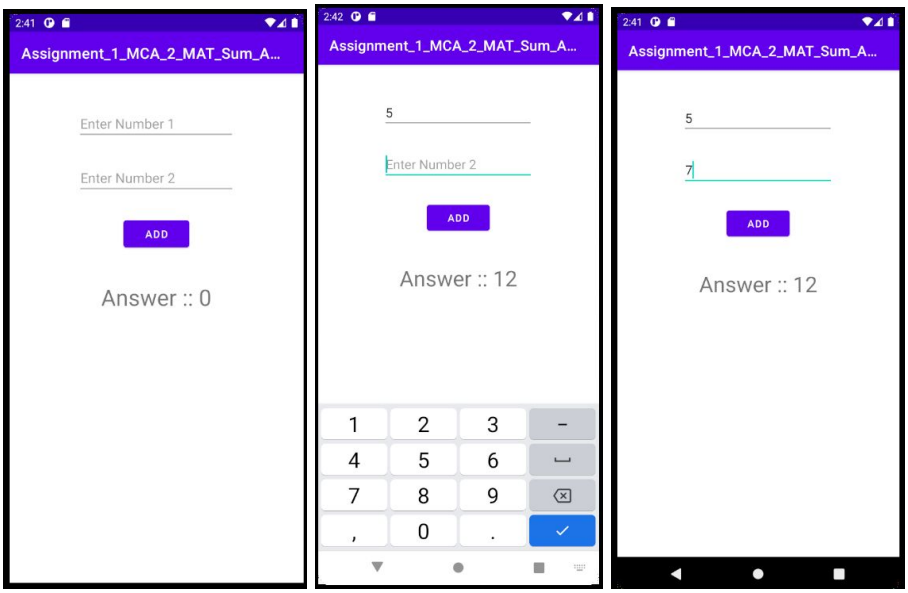
```
                myToast.show();
            }
        }
        else
        {
            number1 = 0;
            Toast myToast = Toast.makeText(this, "Please Enter 1st Number (0 Will Be Used)", Toast.LENGTH_LONG);
            myToast.show();
        }

        if(!TextUtils.isEmpty(txtNumber2.getText().toString())) {
            try {
                number2 = Integer.parseInt(txtNumber2.getText().toString());
            } catch (NumberFormatException nfe) {
                number2 = 0;
                Toast myToast = Toast.makeText(this, "2nd Number cannot be used as number default (0) will be used", Toast.LENGTH_LONG);
                myToast.show();
            }
        }
        else
        {
            number2 = 0;
            Toast myToast = Toast.makeText(this, "Please Enter 2nd Number (0 Will Be Used)", Toast.LENGTH_LONG);
            myToast.show();
        }
    }

    public void getViews()
    {
        txtNumber1 = (EditText) findViewById(R.id.txtNumber1);
        txtNumber2 = (EditText) findViewById(R.id.txtNumber2);
        btnAddition = (Button) findViewById(R.id.btnAddition);
        tvAnswer = (TextView) findViewById(R.id.tvAnswer);
    }

    private View.OnClickListener AdditionButtonClick = new View.OnClickListener() {
        @Override
        public void onClick(View v) {
            ConvertingValues();
            tvAnswer.setText("Answer :: " + Integer.toString(number1+number2));
        }
    };
}
```

View


2:41
Assignment_1_MCA_2_MAT_Sum_A...
Enter Number 1
Enter Number 2
ADD
Answer :: 0
2:42
Assignment_1_MCA_2_MAT_Sum_A...
5
Enter Number 2
ADD
Answer :: 12
1 2 3 -
4 5 6
7 8 9
, 0 .
2:41
Assignment_1_MCA_2_MAT_Sum_A...
5
7
ADD
Answer :: 12

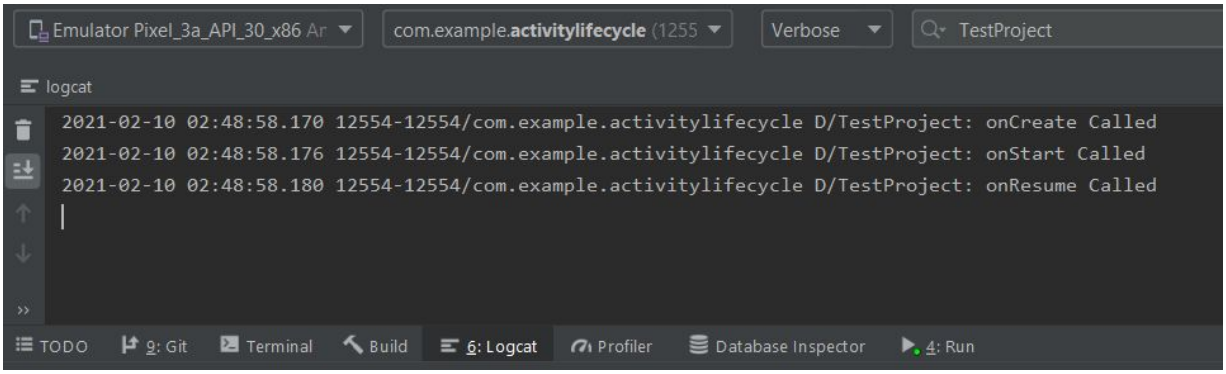
2) Create an Android application to demonstrate the Activity LifeCycle.

MainActivity

```
1. package com.example.activitylifecycle;
2.
3. import androidx.appcompat.app.AppCompatActivity;
4.
5. import android.os.Bundle;
6. import android.util.Log;
7.
8. public class MainActivity extends AppCompatActivity {
9.
10.     @Override
11.     protected void onCreate(Bundle savedInstanceState) {
12.         super.onCreate(savedInstanceState);
13.         setContentView(R.layout.activity_main);
14.         Log.d("TestProject","onCreate Called");
15.     }
16.
17.     @Override
18.     protected void onStart() {
19.         super.onStart();
20.         Log.d("TestProject","onStart Called");
21.     }
22.
23.     @Override
24.     protected void onResume() {
25.         super.onResume();
26.         Log.d("TestProject","onResume Called");
27.     }
28.
29.     @Override
30.     protected void onPause() {
31.         super.onPause();
32.         Log.d("TestProject","onPause Called");
33.     }
34.
35.     @Override
36.     protected void onStop() {
37.         super.onStop();
38.         Log.d("TestProject","onStop Called");
39.     }
40.
41.     @Override
42.     protected void onRestart() {
43.         super.onRestart();
44.         Log.d("TestProject","onRestart Called");
45.     }
46.
47.     @Override
```

```
48.     protected void onDestroy() {
49.         super.onDestroy();
50.         Log.d("TestProject","onDestroy Called");
51.     }
52. }
```

LogCat



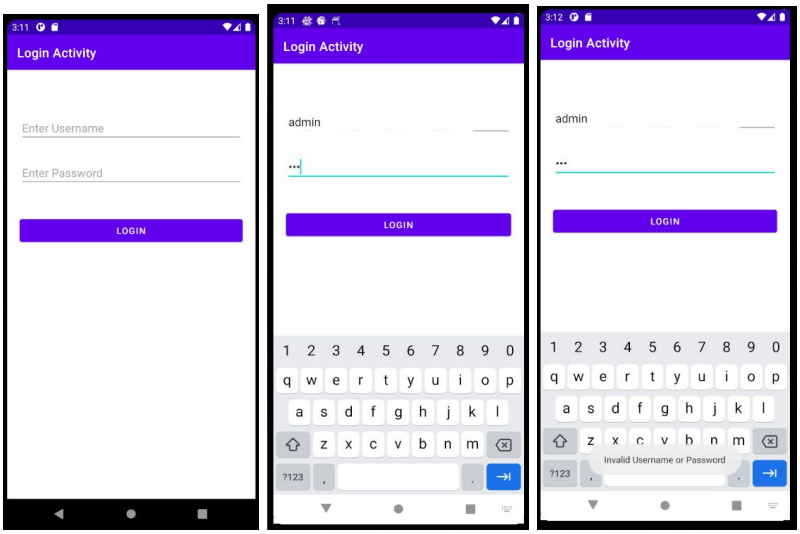
3) **Create an application to understand Activity, Intent, Create sample application with login module. (Check username and password).**

MainActivity (Code)

```
1. package com.example.loginactivity;
2.
3. import androidx.appcompat.app.AppCompatActivity;
4.
5. import android.content.Intent;
6. import android.os.Bundle;
7. import android.view.View;
8. import android.widget.Button;
9. import android.widget.EditText;
10. import android.widget.TextView;
11. import android.widget.Toast;
12.
13. public class MainActivity extends AppCompatActivity {
14.
15.     EditText txtUsername, txtPassword;
16.     Button btnLogin;
17.
18.     @Override
19.     protected void onCreate(Bundle savedInstanceState) {
20.         super.onCreate(savedInstanceState);
21.         setContentView(R.layout.activity_main);
22.         getViews();
23.         btnLogin.setOnClickListener(LoginButtonClick);
24.     }
25.
26.     public void getViews()
27.     {
28.         txtUsername = (EditText) findViewById(R.id.txtUsername);
29.         txtPassword = (EditText) findViewById(R.id.txtPassword);
30.         btnLogin = (Button) findViewById(R.id.btnLogin);
31.     }
32.
33.     public void LoginValid()
34.     {
35.         Intent myIntent = new Intent(this, MainActivity2.class);
36.         startActivity(myIntent);
37.     }
38.
39.     public void LoginInvalid()
40.     {
41.         Toast myToast = Toast.makeText(this, "Invalid Username or Password",
    Toast.LENGTH_LONG);
42.         myToast.show();
43.     }
44.
45.     private View.OnClickListener LoginButtonClick = new View.OnClickListener()
```

```
    {
        @Override
        public void onClick(View v) {
            if(txtUsername.getText().toString().equals("admin") &&
    txtPassword.getText().toString().equals("admin123@"))
            {
                LoginValid();
            }
            else
            {
                LoginInvalid();
            }
        }
    };
}
```

MainActivity (View)



MainActivity2 (Code)

```
package com.example.loginactivity;

import androidx.appcompat.app.AppCompatActivity;

import android.os.Bundle;

public class MainActivity2 extends AppCompatActivity {

    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_main2);
    }
}
```

MainActivity2 (View)