FR. CONCEICAO RODRIGUES COLLEGE OF ENGINEERING
Department of Computer Engineering

Academic Term : Jan-July 2022

Class : T.E Computer Sem -VI
Subject : Mobile Computing

Practical No:	**7**
Title:	Develop an application that writes data to the SD card
Date of Performance:	**21/03/2022**
Date of Submission:	**21/03/2022**
Roll No:	**8940**
Name of the Student:	**Warren Fernandes**

Evaluation:

Sr. No	Rubric	Grade
1	On time submission Or completion (2)	
2	Preparedness(2)	
3	Skill (4)	
4	Output (2)	

Signature of the Teacher :

PRACTICAL - 9

Title : To develop a Android Application that writes data to the SD Card.

Objective : To study basic components and features of Andriod.

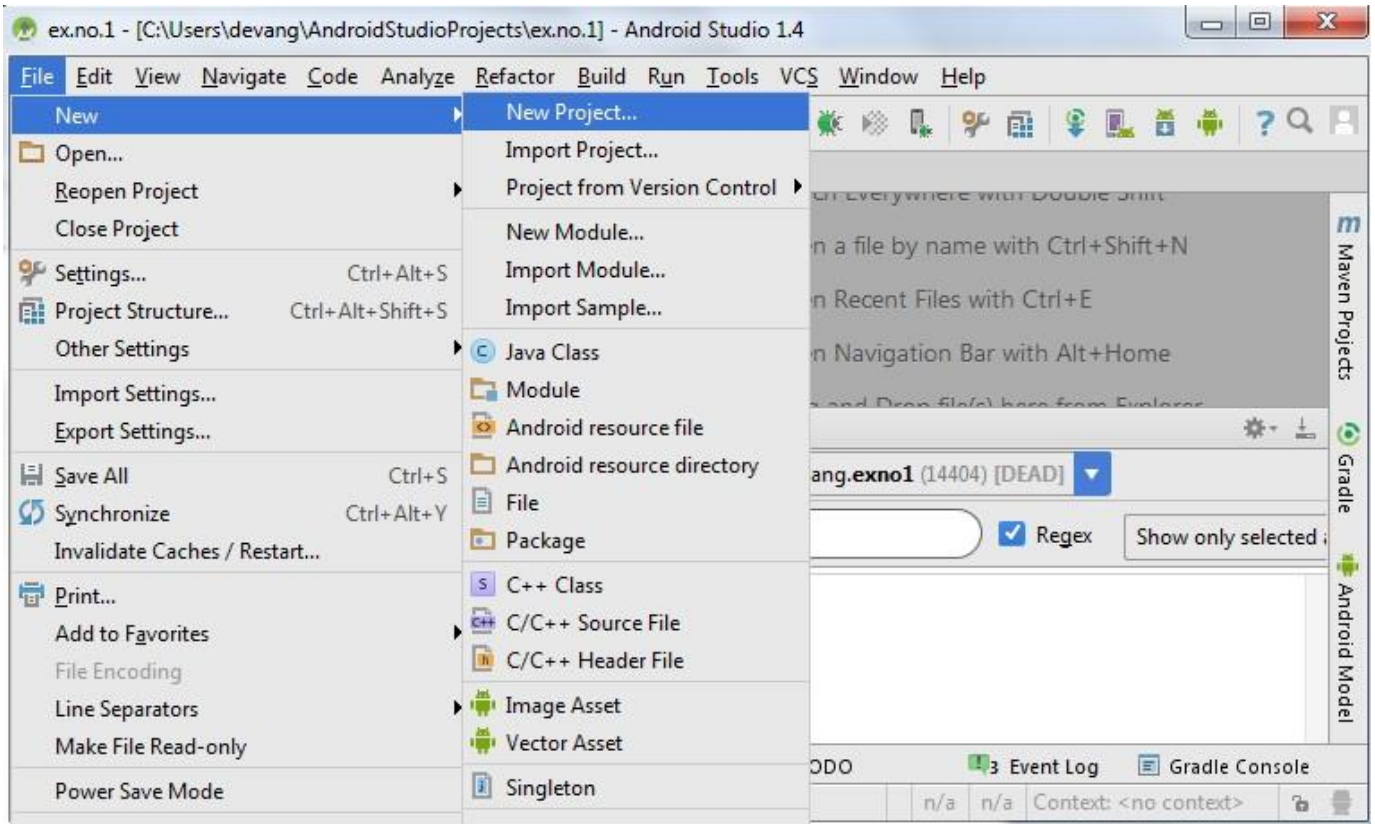
References : W. Frank, Robi sen, "Android in action", Dreamtech Press.

Prerequisite : knowledge of Java Programming.

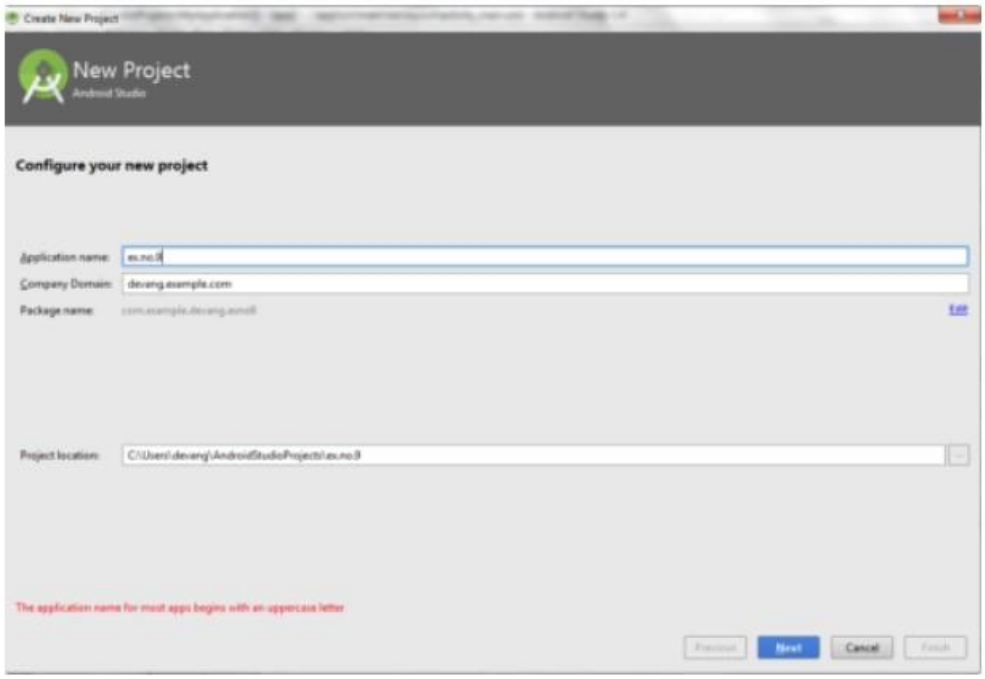
Procedure:

Creating a New project:

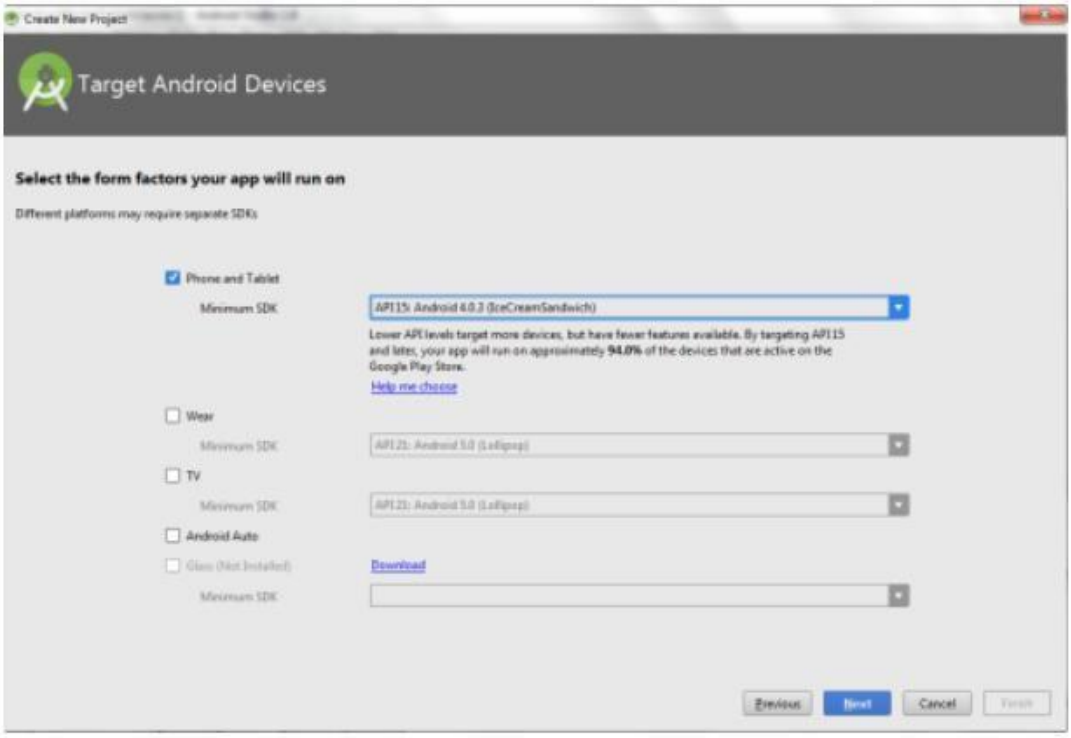
- Open Android Studio and then click on **File -> New -> New project.**



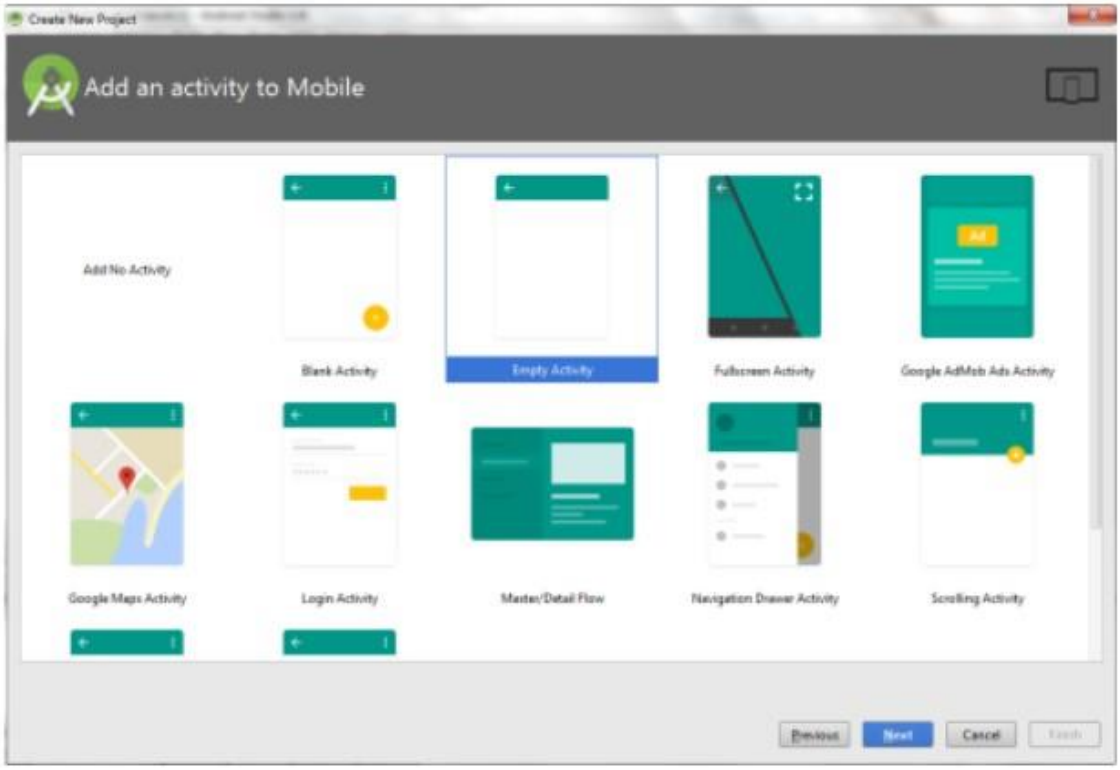
- Then type the Application name as "**ex.no.9"** and click **Next.**



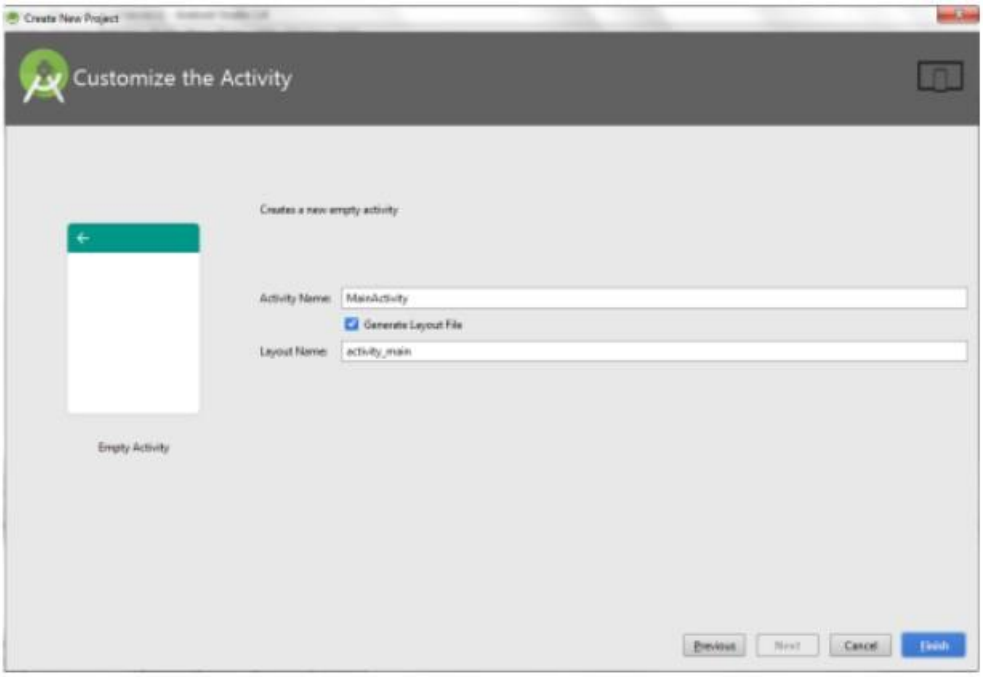
- Then select the **Minimum SDK** as shown below and click **Next**.



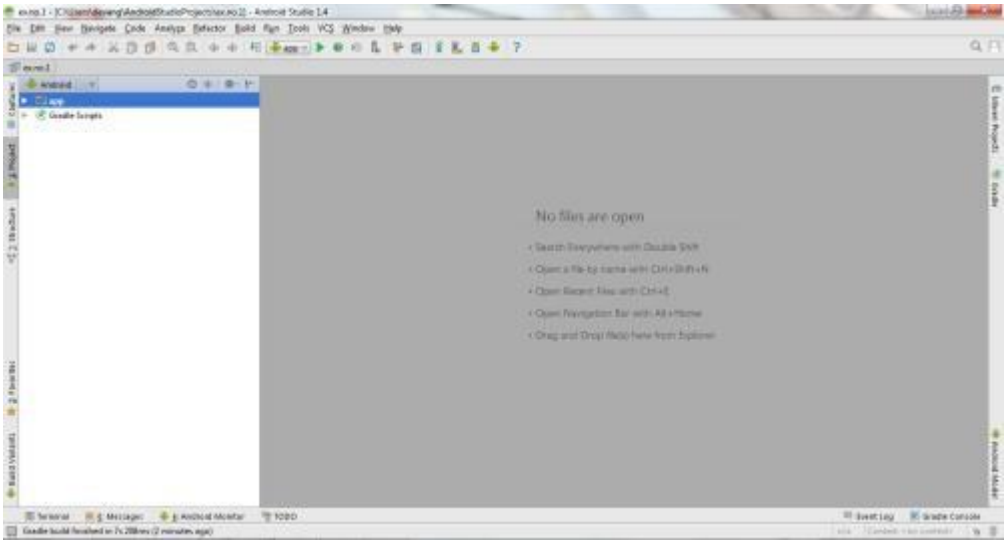
Then select the **Empty Activity** and click **Next.**



- Finally click F**inish**.



- It will take some time to build and load the project.
- After completion it will look as given below.



Designing layout for the Android Application:

- Click on app -> res -> layout -> activity_main.xml.
- Now click on Text as shown below.
- Then delete the code which is there and type the code as given below.

Code for Activity_main.xml:

```
<?xml version="1.0" encoding="utf-8"?>
<LinearLayout
xmlns:android="http://schemas.android.com/apk/res/android"
android:layout_width="match_parent"
android:layout_height="match_parent"     android:layout_margin="20dp"
   android:orientation="vertical">

   <EditText
      android:id="@+id/editText"
android:layout_width="match_parent"
android:layout_height="wrap_content"
android:singleLine="true"
      android:textSize="30dp" />

   <Button
      android:id="@+id/button"
android:layout_width="match_parent"
android:layout_height="wrap_content"
android:layout_margin="10dp"
android:text="Write Data"
      android:textSize="30dp" />
```

```
    <Button
        android:id="@+id/button2"
    android:layout_width="match_parent"
    android:layout_height="wrap_content"
    android:layout_margin="10dp"
    android:text="Read data"
        android:textSize="30dp" />

    <Button
        android:id="@+id/button3"
    android:layout_width="match_parent"
    android:layout_height="wrap_content"
    android:layout_margin="10dp"
    android:text="Clear"
        android:textSize="30dp" />

    </LinearLayout>
```

- Now click on Design and your application will look as given below.
- So now the designing part is completed.
- Adding permissions in Manifest for the Android Application:
- Click on app -> manifests -> AndroidManifest.xml
- Now include the **WRITE_EXTERNAL_STORAGE** permissions in the AndroidManifest.xml file

Code for AndroidManifest.xml:

```
    <?xml version="1.0" encoding="utf-8"?>
    <manifest xmlns:android="http://schemas.android.com/apk/res/android"
    package="com.example.exno9" >

    <uses-permission
    android:name="android.permission.WRITE_EXTERNAL_STORAGE"></usespermission>

    <application
        android:allowBackup="true"
    android:icon="@mipmap/ic_launcher"
    android:label="@string/app_name"
    android:supportsRtl="true"
    android:theme="@style/AppTheme" >
    <activity android:name=".MainActivity" >
            <intent-filter>
                <action android:name="android.intent.action.MAIN" />
```

```
            <category android:name="android.intent.category.LAUNCHER" />
          </intent-filter>
        </activity>
      </application>
    </manifest>
```

- So now the Permissions are added in the Manifest. Java Coding for the Android Application:
- Click on **app -> java -> com.example.exno9 -> MainActivity.**
- Then delete the code which is there and type the code as given below.
- **Code for MainActivity.java:**

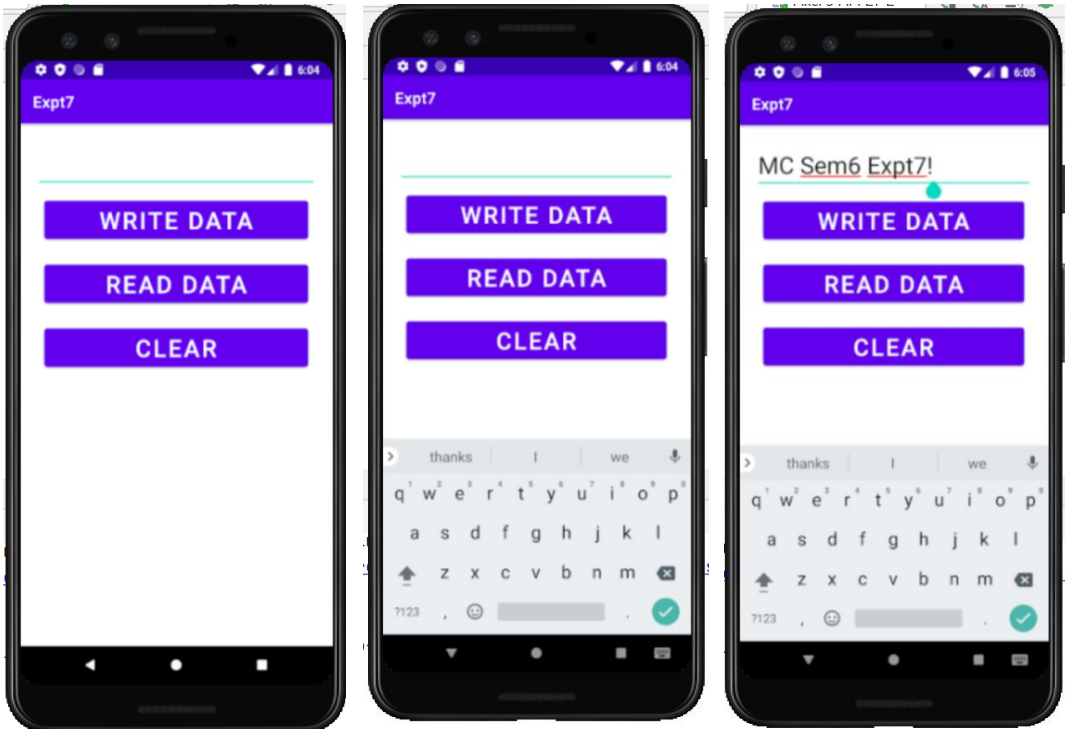
```
package com.example.exno9;

import android.os.Bundle;
import android.support.v7.app.AppCompatActivity;
import android.view.View; import
android.widget.Button; import
android.widget.EditText;
import android.widget.Toast;

import java.io.BufferedReader;
import java.io.File; import
java.io.FileInputStream; import
java.io.FileOutputStream;
import java.io.InputStreamReader;

public class MainActivity extends AppCompatActivity
{
   EditText e1;
   Button write,read,clear;
@Override
   protected void onCreate(Bundle savedInstanceState)
   {
      super.onCreate(savedInstanceState);
      setContentView(R.layout.activity_main);

      e1= (EditText) findViewById(R.id.editText);
write= (Button) findViewById(R.id.button);        read=
(Button) findViewById(R.id.button2);
      clear= (Button) findViewById(R.id.button3);

      write.setOnClickListener(new View.OnClickListener()
      {
```

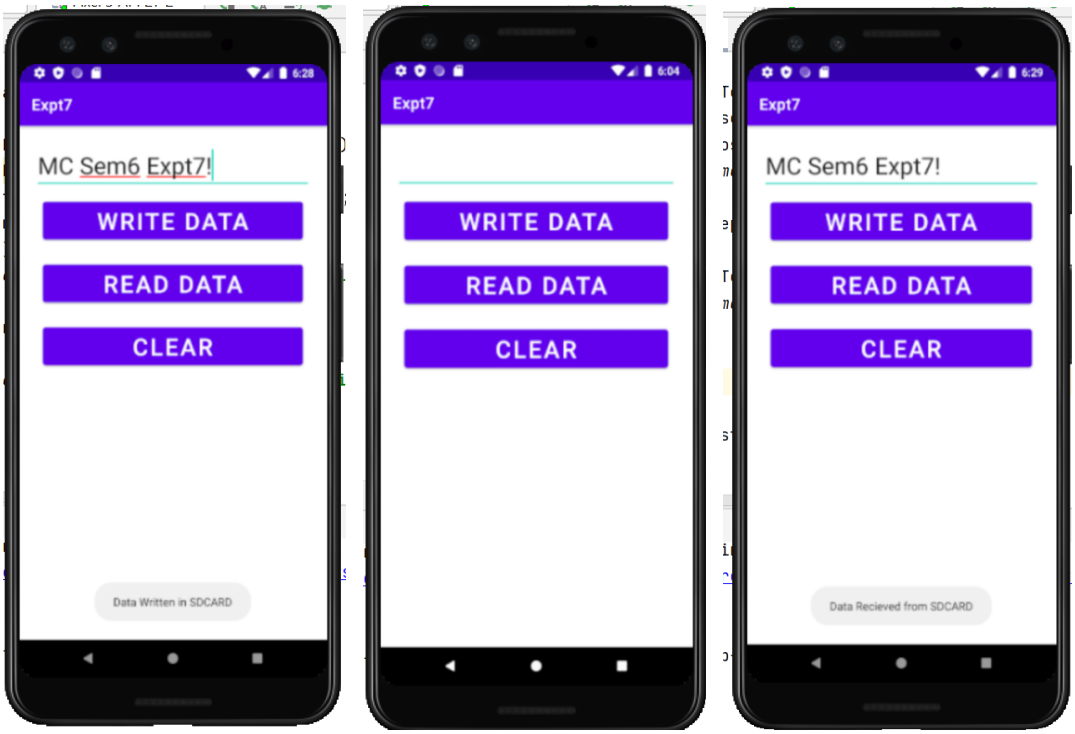
```
        @Override
        public void onClick(View v)
        {
           String message=e1.getText().toString();
try
           {
              File f=new File("/sdcard/myfile.txt");
              f.createNewFile();
              FileOutputStream fout=new FileOutputStream(f);
              fout.write(message.getBytes());
              fout.close();
              Toast.makeText(getBaseContext(),"Data Written in
SDCARD",Toast.LENGTH_LONG).show();
           }
           catch (Exception e)
           {
              Toast.makeText(getBaseContext(),e.getMessage(),Toast.LENGTH_LONG).show();
           }
        }
     });

     read.setOnClickListener(new View.OnClickListener()
     {
        @Override
        public void onClick(View v)
        {
           String message;
String buf = "";
           try
           {
              File f = new File("/sdcard/myfile.txt");
              FileInputStream fin = new FileInputStream(f);
              BufferedReader br = new BufferedReader(new InputStreamReader(fin));
while ((message = br.readLine()) != null)
              {
                 buf += message;
              }
              e1.setText(buf);
br.close();              fin.close();
              Toast.makeText(getBaseContext(),"Data Recived from
SDCARD",Toast.LENGTH_LONG).show();
           }
           catch (Exception e)
```

```
            {
                Toast.makeText(getBaseContext(), e.getMessage(),
Toast.LENGTH_LONG).show();
            }
        }
    });

    clear.setOnClickListener(new View.OnClickListener()
    {
        @Override
        public void onClick(View v)
        {
            e1.setText("");
        }
    });
  }
}
```

- So now the Coding part is also completed.
- Now run the application to see the output.

OUTPUT:




Expt7
MC Sem6 Expt7!
WRITE DATA
READ DATA
CLEAR
Data Written in SDCARD
Expt7
WRITE DATA
READ DATA
CLEAR
Expt7
MC Sem6 Expt7!
WRITE DATA
READ DATA
CLEAR
Data Recieved from SDCARD