

Experiment – 13

Aim: Design an application to monitor the health conditions of a user and to notify the same.

Solution:

activity_main.xml:

```
<?xml version="1.0" encoding="utf-8"?>
<androidx.constraintlayout.widget.ConstraintLayout
xmlns:android="http://schemas.android.com/apk/res/android"
xmlns:app="http://schemas.android.com/apk/res-auto"
xmlns:tools="http://schemas.android.com/tools"
android:layout_width="match_parent"
android:layout_height="match_parent"
tools:context=".MainActivity">

<EditText
    android:id="@+id/bpBox"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:ems="10"
    android:hint="Enter BP value"
    android:inputType="text"
    android:minHeight="48dp"
    app:layout_constraintStart_toEndOf="@+id/bpLbl"
    app:layout_constraintEnd_toEndOf="parent"
    app:layout_constraintTop_toBottomOf="@+id/Header"
    app:layout_constraintBottom_toTopOf="@+id/tempBox"/>

<TextView
    android:id="@+id/tempLbl"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:text="Temperature"
    android:textStyle="bold"
    app:layout_constraintStart_toStartOf="parent"
    app:layout_constraintEnd_toStartOf="@+id/tempBox"
    app:layout_constraintTop_toBottomOf="@+id/bpLbl"
    app:layout_constraintBottom_toTopOf="@+id/submitBtn"/>

<TextView
    android:id="@+id/bpLbl"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:text="Blood Pressure"
    android:textStyle="bold"
    app:layout_constraintStart_toStartOf="parent"
    app:layout_constraintEnd_toStartOf="@+id/bpBox"
    app:layout_constraintTop_toBottomOf="@+id/Header"
    app:layout_constraintBottom_toTopOf="@+id/tempLbl"/>

<EditText
```

```
    android:id="@+id/tempBox"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:ems="10"
    android:hint="Enter Temperature Value"
    android:inputType="text"
    android:minHeight="48dp"
    app:layout_constraintStart_toEndOf="@+id/tempLbl"
    app:layout_constraintEnd_toEndOf="parent"
    app:layout_constraintTop_toBottomOf="@+id/bpBox"
    app:layout_constraintBottom_toTopOf="@+id/submitBtn"/>
```

```
<Button
    android:id="@+id/submitBtn"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:text="Submit"
    app:layout_constraintStart_toStartOf="parent"
    app:layout_constraintEnd_toEndOf="parent"
    app:layout_constraintBottom_toBottomOf="parent"
    app:layout_constraintTop_toBottomOf="@+id/tempBox"/>
```

```
<TextView
    android:id="@+id/Header"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:text="Body Vital Details"
    android:textSize="24sp"
    android:textStyle="bold"
    app:layout_constraintStart_toStartOf="parent"
    app:layout_constraintEnd_toEndOf="parent"
    app:layout_constraintTop_toTopOf="parent"
    app:layout_constraintBottom_toTopOf="@+id/bpBox"/>
```

```
</androidx.constraintlayout.widget.ConstraintLayout>
```

MainActivity.java:

```
package com.example.healthmonitoringapp;

import androidx.annotation.RequiresApi;
import androidx.appcompat.app.AppCompatActivity;
import androidx.core.app.NotificationCompat;

import android.app.NotificationChannel;
import android.app.NotificationManager;
import android.app.PendingIntent;
import android.content.Intent;
import android.os.Build;
import android.os.Bundle;
import android.view.View;
```

```

import android.widget.Button;
import android.widget.EditText;

public class MainActivity extends AppCompatActivity {
    EditText bp,temp;
    Button btn;
    Integer bp_int,temp_int;
    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_main);
        bp = findViewById(R.id.bpBox);
        temp = findViewById(R.id.tempBox);
        btn = findViewById(R.id.submitBtn);
        btn.setOnClickListener(new View.OnClickListener() {
            @RequiresApi(api = Build.VERSION_CODES.O)
            @Override
            public void onClick(View v) {
                bp_int = Integer.parseInt(bp.getText().toString());
                temp_int = Integer.parseInt(temp.getText().toString());
                String msg;
                int notificationId = 100;
                if((bp_int>=60&&bp_int<=100)||temp_int==98)
                    msg = "Your Vitals are fine";
                else
                    msg = "You need to consult doctor";
                String CHANNEL_ID = "my_ch";
                String CHANNEL_NAME = "my_channel";
                int importance = NotificationManager.IMPORTANCE_HIGH;
                NotificationChannel channel = new
NotificationChannel(CHANNEL_ID,CHANNEL_NAME,importance);
                NotificationManager manager = (NotificationManager)
getSystemService(NOTIFICATION_SERVICE);
                manager.createNotificationChannel(channel);
                Intent it = new Intent(MainActivity.this, NotificationResult.class);
                it.putExtra("Message",msg);
                it.addFlags(Intent.FLAG_ACTIVITY_SINGLE_TOP|Intent.FLAG_ACTIVITY_CLEAR_TOP);
                PendingIntent pintent =
PendingIntent.getActivity(MainActivity.this,0,it,PendingIntent.FLAG_UPDATE_CURRENT);
                NotificationCompat.Builder builder = new
NotificationCompat.Builder(MainActivity.this,CHANNEL_ID);
                builder.setSmallIcon(R.drawable.ic_launcher_background);
                builder.setContentIntent(pintent);
                builder.setTitle("Vital Conditions");
                builder.setContentText("BP: "+bp_int+" Temperature: "+temp_int);
                manager.notify(notificationId,builder.build());
            }
        });
    }
}

```

activity_notification_result.xml:

```
<?xml version="1.0" encoding="utf-8"?>
<androidx.constraintlayout.widget.ConstraintLayout
xmlns:android="http://schemas.android.com/apk/res/android"
xmlns:app="http://schemas.android.com/apk/res-auto"
xmlns:tools="http://schemas.android.com/tools"
android:layout_width="match_parent"
android:layout_height="match_parent"
tools:context=".NotificationResult">

<TextView
    android:id="@+id/result"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:textStyle="bold"
    android:textSize="40dp"
    android:textColor="#0F08F0"
    app:layout_constraintStart_toStartOf="parent"
    app:layout_constraintEnd_toEndOf="parent"
    app:layout_constraintTop_toTopOf="parent"
    app:layout_constraintBottom_toBottomOf="parent"/>
</androidx.constraintlayout.widget.ConstraintLayout>
```

NotificationResult.java:

```
package com.example.healthmonitoringapp;

import androidx.appcompat.app.AppCompatActivity;

import android.app.NotificationManager;
import android.content.Intent;
import android.os.Bundle;
import android.widget.TextView;

public class NotificationResult extends AppCompatActivity {
    TextView res;

    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_notification_result);
        onNewIntent(getIntent());
        NotificationManager manager = (NotificationManager)
getSystemService(NOTIFICATION_SERVICE);
        manager.cancel(100);
    }

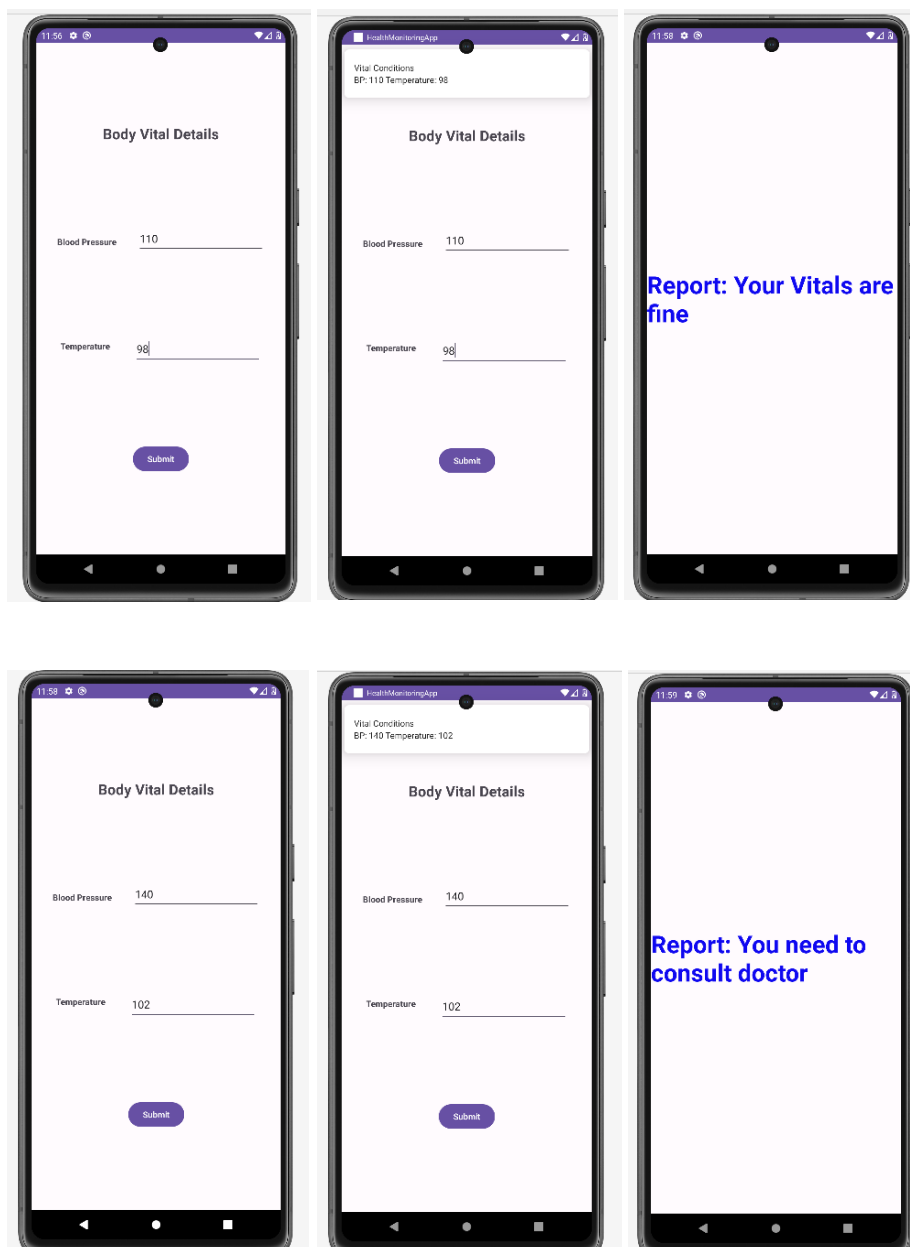
    @Override
    protected void onNewIntent(Intent intent) {
        Bundle extras = intent.getExtras();
```

```

    if(extras!=null) {
        if (extras.containsKey("Message")) {
            setContentView(R.layout.activity_notification_result);
            String msg = extras.getString("Message");
            res = findViewById(R.id.result);
            res.setText("Report: "+msg);
        }
        super.onNewIntent(intent);
    }
}
}
}

```

Output:



Experiment – 14

Aim: Design an application to Book the movie tickets. Save the movie name and number of tickets using shared preferences.

Solution:

activity_main.xml:

```
<?xml version="1.0" encoding="utf-8"?>
<androidx.constraintlayout.widget.ConstraintLayout
xmlns:android="http://schemas.android.com/apk/res/android"
xmlns:app="http://schemas.android.com/apk/res-auto"
xmlns:tools="http://schemas.android.com/tools"
android:layout_width="match_parent"
android:layout_height="match_parent"
tools:context=".MainActivity">

    <TextView
        android:id="@+id/Header"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:text="Ticket Booking App"
        android:textSize="24sp"
        android:textStyle="bold"
        app:layout_constraintStart_toStartOf="parent"
        app:layout_constraintEnd_toEndOf="parent"
        app:layout_constraintTop_toTopOf="parent"
        app:layout_constraintBottom_toTopOf="@+id/movieslist"/>

    <TextView
        android:id="@+id/movieTitle"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:text="Movies"
        android:textStyle="bold"
        app:layout_constraintStart_toStartOf="parent"
        app:layout_constraintEnd_toStartOf="@+id/movieslist"
        app:layout_constraintTop_toBottomOf="@+id/Header"
        app:layout_constraintBottom_toTopOf="@+id/ticketscountlbl"/>

    <Spinner
        android:id="@+id/movieslist"
        android:layout_width="200dp"
        android:layout_height="wrap_content"
        android:minHeight="48dp"
        app:layout_constraintStart_toEndOf="@+id/movieTitle"
        app:layout_constraintEnd_toEndOf="parent"
        app:layout_constraintTop_toBottomOf="@+id/Header"
        app:layout_constraintBottom_toTopOf="@+id/ticketsctBox"/>

    <TextView
```

```

        android:id="@+id/ticketscountlbl"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:text="No. of Tickets"
        android:textStyle="bold"
        app:layout_constraintStart_toStartOf="parent"
        app:layout_constraintEnd_toStartOf="@+id/ticketsctBox"
        app:layout_constraintTop_toBottomOf="@+id/movieTitle"
        app:layout_constraintBottom_toTopOf="@+id/submitBtn"/>

<EditText
    android:id="@+id/ticketsctBox"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:ems="10"
    android:hint=" Enter no. of tickets"
    android:inputType="text"
    android:minHeight="48dp"
    app:layout_constraintStart_toEndOf="@+id/ticketscountlbl"
    app:layout_constraintEnd_toEndOf="parent"
    app:layout_constraintTop_toBottomOf="@+id/movieslist"
    app:layout_constraintBottom_toTopOf="@+id/submitBtn"/>

<Button
    android:id="@+id/submitBtn"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:text="Submit"
    app:layout_constraintStart_toStartOf="parent"
    app:layout_constraintEnd_toEndOf="parent"
    app:layout_constraintTop_toBottomOf="@+id/ticketsctBox"
    app:layout_constraintBottom_toBottomOf="parent"/>
</androidx.constraintlayout.widget.ConstraintLayout>

```

MainActivity.java:

```

package com.example.movieticketbookingsp;

import androidx.appcompat.app.AppCompatActivity;

import android.content.SharedPreferences;
import android.os.Bundle;
import android.view.View;
import android.widget.AdapterView;
import android.widget.AdapterView.OnItemClickListener;
import android.widget.ArrayAdapter;
import android.widget.Button;
import android.widget.EditText;
import android.widget.Spinner;
import android.widget.Toast;

```

```

public class MainActivity extends AppCompatActivity {
    EditText count;
    Spinner list;
    Button sub;
    String movies[] = {"Jawan","Leo","Tiger3","Ghost"};
    int selectedPos;
    SharedPreferences sharedPreferences;
    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_main);
        count = findViewById(R.id.ticketsctBox);
        list = findViewById(R.id.movieslist);
        sub = findViewById(R.id.submitBtn);
        ArrayAdapter adapter = new ArrayAdapter(this,
android.R.layout.simple_spinner_dropdown_item,movies);
        list.setAdapter(adapter);
        list.setOnItemClickListener(new AdapterView.OnItemClickListener() {
            @Override
            public void onItemClick(AdapterView<?> parent, View view, int position, long id) {
                selectedPos = position;
            }

            @Override
            public void onNothingSelected(AdapterView<?> parent) {

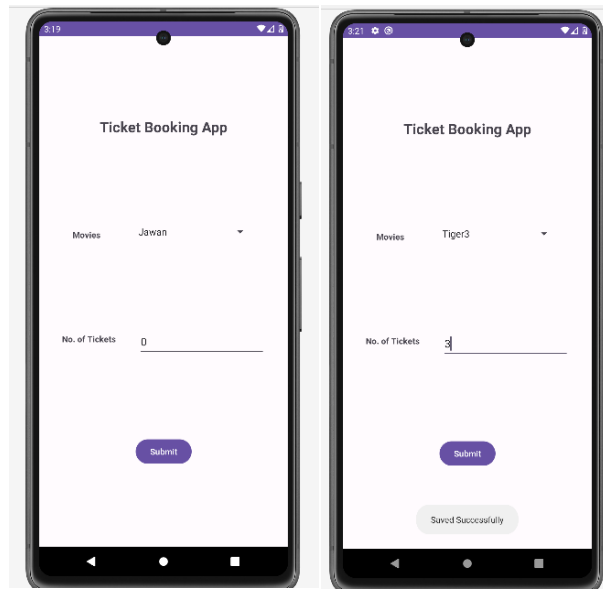
            }
        });
        sub.setOnClickListener(new View.OnClickListener() {
            @Override
            public void onClick(View v) {
                sharedPreferences = getSharedPreferences("MyPreferences",MODE_PRIVATE);
                SharedPreferences.Editor editor = sharedPreferences.edit();
                editor.putInt("MovieName",selectedPos);
                editor.putInt("TicketsCount",Integer.parseInt(count.getText().toString()));
                editor.apply();
                Toast.makeText(MainActivity.this, "Saved Successfully", Toast.LENGTH_SHORT).show();
            }
        });
    }

    @Override
    protected void onResume() {
        super.onResume();
        SharedPreferences sh = getSharedPreferences("MyPreferences",MODE_PRIVATE);
        int spos = sh.getInt("MovieName",0);
        int ct = sh.getInt("TicketsCount",0);
        list.setSelection(spos);
        count.setText(String.valueOf(ct));
    }
}

```


}

Output:



You can clear the app from running and open the same app again

