

Department of CSE

SSN College of Engineering

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UCS 1711 - Mobile Application Development Lab

Exercise 1: Application Using GUI Components, Font and Colours

Aim:

Generate a registration form for a hospital to register new patient details as below:

- Assign a title for the registration form (TextView- textSize, textStyle, typeface)
- Name. Specify some font and colour. (use TextView, EditText-standard)
- Address (use TextView, EditText-standard)
- Age (TextView, EditText)
- Date of Birth (DatePicker)
- Gender (RadioButton)
- Marital Status (Spinner)
- Contact Number (EditText- inputType, phoneNumber)
- Registration time (TimePicker)
- Addiction (Smoking, Alcohol) (CheckBox)
- Submit (Button)
- Reset (Button)

Code: Main Activity:

```
1 package com.example.patientregistration;
2
3 import androidx.appcompat.app.AppCompatActivity;
4
5 import android.app.DatePickerDialog;
6 import android.app.TimePickerDialog;
7 import android.content.Intent;
8 import android.os.Bundle;
9 import android.view.View;
10 import android.widget.Button;
11 import android.widget.CheckBox;
12 import android.widget.DatePicker;
13 import android.widget.EditText;
14 import android.widget.RadioButton;
15 import android.widget.RadioGroup;
16 import android.widget.Spinner;
17 import android.widget.TimePicker;
18
19 import java.util.Calendar;
20
21 public class MainActivity extends AppCompatActivity {
22
23     @Override
24     protected void onCreate(Bundle savedInstanceState) {
25         super.onCreate(savedInstanceState);
26         setContentView(R.layout.activity_main);
27
28         final EditText nameField = findViewById(R.id.nameField);
29         final EditText dateField = findViewById(R.id.dateField);
30         final RadioGroup genderGroup = findViewById(R.id.genderRadioGroup)
31     ;
32         final Spinner maritalList = findViewById(R.id.maritalList);
33         final EditText timeField = findViewById(R.id.timeField);
34         final CheckBox smokingCheck = findViewById(R.id.smokingCheckBox);
35         final CheckBox drinkingCheck = findViewById(R.id.drinkingCheckBox)
36     ;
37         final EditText ageField = findViewById(R.id.ageField);
38         final EditText phoneField = findViewById(R.id.phoneField);
39         final EditText addressField = findViewById(R.id.addrField);
40         final Button clearButton = findViewById(R.id.resetButton);
41         final Button submitButton = findViewById(R.id.submitButton);
42
43         //Calendar instance for the DatePicker & TimePicker
44         final Calendar calendar = Calendar.getInstance();
45
46         dateField.setOnClickListener(new View.OnClickListener() {
47             @Override
```

```

46         public void onClick(View v) {
47             int day = calendar.get(Calendar.DAY_OF_MONTH);
48             int month = calendar.get(Calendar.MONTH);
49             int year = calendar.get(Calendar.YEAR);
50
51             //Date Picker Dialog
52             DatePickerDialog datePicker = new DatePickerDialog(
MainActivity.this, new DatePickerDialog.OnDateSetListener() {
53                 @Override
54                 public void onDateSet(DatePicker view, int year, int
month, int dayOfMonth) {
55                     dateField.setText(dayOfMonth + "/" + (month + 1) +
"/" + year);
56                 }
57                 }, year, month, day);
58             datePicker.show();
59         }
60     });
61
62     timeField.setOnClickListener(new View.OnClickListener() {
63         @Override
64         public void onClick(View v) {
65             int hour = calendar.get(Calendar.HOUR_OF_DAY);
66             int minutes = calendar.get(Calendar.MINUTE);
67
68             //Time Picker Dialog
69             TimePickerDialog timePicker = new TimePickerDialog(
MainActivity.this, new TimePickerDialog.OnTimeSetListener() {
70                 @Override
71                 public void onTimeSet(TimePicker view, int hourOfDay,
int minute) {
72                     timeField.setText(hourOfDay + ":" + minute);
73                 }
74                 }, hour, minutes, false);
75             timePicker.show();
76         }
77     });
78
79     submitButton.setOnClickListener(new View.OnClickListener() {
80         //define event for onClick of Submit Button
81         @Override
82         public void onClick(View v) {
83             String patientName = nameField.getText().toString();
84             String patientDate = dateField.getText().toString();
85             String patientGender = "Not Selected";
86
87             int selectedId = genderGroup.getCheckedRadioButtonId();
88
89             if(selectedId > 0){
90                 RadioButton selectedRadioBtn = (RadioButton)
findViewById(selectedId);

```

```

91         patientGender = selectedRadioBtn.getText().toString();
92     }
93
94     String patientMarital = maritalList.getSelectedItemAt().
toString();
95     String patientTime = timeField.getText().toString();
96     String patientAddictions = "";
97
98     if(smokingCheck.isChecked() && drinkingCheck.isChecked()){
99         patientAddictions += "Smoking, Drinking";
100     }
101
102     else if(drinkingCheck.isChecked()){
103         patientAddictions += "Drinking";
104     }
105
106     else if(smokingCheck.isChecked()){
107         patientAddictions += "Smoking";
108     }
109
110     else{
111         patientAddictions += "-NIL-";
112     }
113
114     String patientPhone = phoneField.getText().toString();
115     String patientAddress = addressField.getText().toString();
116     int patientAge = Integer.parseInt(ageField.getText().
toString());
117
118     //Transfer the contents to the SubmitActivity class using
an Intent
119     Intent submitIntent = new Intent(getApplicationContext(),
SubmitActivity.class);
120     submitIntent.putExtra("patientName", patientName);
121     submitIntent.putExtra("patientDate", patientDate);
122     submitIntent.putExtra("patientGender", patientGender);
123     submitIntent.putExtra("patientMarital", patientMarital);
124     submitIntent.putExtra("patientTime", patientTime);
125     submitIntent.putExtra("patientAddictions",
patientAddictions);
126     submitIntent.putExtra("patientAge", patientAge);
127     submitIntent.putExtra("patientPhone", patientPhone);
128     submitIntent.putExtra("patientAddress", patientAddress);
129
130     startActivity(submitIntent);
131 }
132 });
133
134 clearButton.setOnClickListener(new View.OnClickListener() {
135     //define event for onClick of Clear All Button
136     @Override

```

```
137         public void onClick(View v) {
138             nameField.setText("");
139             dateField.setText("");
140             genderGroup.clearCheck();
141             maritalList.setSelection(0);
142             timeField.setText("");
143             smokingCheck.setChecked(false);
144             drinkingCheck.setChecked(false);
145             ageField.setText("");
146             addressField.setText("");
147             phoneField.setText("");
148         }
149     });
150
151 }
152 }
```

Code: Submit Activity

```
1 package com.example.patientregistration;
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.TextView;
9
10 public class SubmitActivity extends AppCompatActivity {
11
12     @Override
13     protected void onCreate(Bundle savedInstanceState) {
14         super.onCreate(savedInstanceState);
15         setContentView(R.layout.activity_submit);
16
17         final TextView nameView = findViewById(R.id.nameText);
18         final TextView dateView = findViewById(R.id.dateText);
19         final TextView genderView = findViewById(R.id.genderText);
20         final TextView maritalView = findViewById(R.id.maritalText);
21         final TextView timeView = findViewById(R.id.timeText);
22         final TextView additionsView = findViewById(R.id.additionsText);
23         final TextView addressView = findViewById(R.id.addressText);
24         final TextView phoneView = findViewById(R.id.phoneText);
25         final TextView ageView = findViewById(R.id.ageText);
26
27         //Get the current class' intent and obtain the stored key-value
        pairs from MainActivity
28         Intent submitIntent = getIntent();
29
30         String patientName = submitIntent.getStringExtra("patientName");
31         String patientDate = submitIntent.getStringExtra("patientDate");
32         String patientGender = submitIntent.getStringExtra("patientGender");
33     );
34         String patientMarital = submitIntent.getStringExtra("
        patientMarital");
35         String patientTime = submitIntent.getStringExtra("patientTime");
36         String patientAdditions = submitIntent.getStringExtra("
        patientAdditions");
37         String patientAddresss = submitIntent.getStringExtra("
        patientAddress");
38         String patientPhone = submitIntent.getStringExtra("patientPhone");
39         int patientAge = submitIntent.getIntExtra("patientAge", 0);
40
41
42         nameView.setText(patientName);
```

```
43     dateView.setText(patientDate);
44     genderView.setText(patientGender);
45     maritalView.setText(patientMarital);
46     timeView.setText(patientTime);
47     addictionsView.setText(patientAddictions);
48     addressView.setText(patientAddresss);
49     phoneView.setText(patientPhone);
50     ageView.setText(Integer.toString(patientAge));
51
52 }
53 }
```

Code: Main Activity Layout

```
1 <?xml version="1.0" encoding="utf-8"?>
2 <androidx.constraintlayout.widget.ConstraintLayout 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   tools:context=".MainActivity">
8
9   <Button
10      android:id="@+id/submitButton"
11      android:layout_width="0dp"
12      android:layout_height="wrap_content"
13      android:layout_marginStart="96dp"
14      android:layout_marginEnd="96dp"
15      android:layout_marginBottom="4dp"
16      android:text="Submit"
17      app:layout_constraintBottom_toBottomOf="parent"
18      app:layout_constraintEnd_toEndOf="parent"
19      app:layout_constraintHorizontal_bias="0.0"
20      app:layout_constraintStart_toStartOf="parent" />
21
22   <Button
23      android:id="@+id/resetButton"
24      android:layout_width="0dp"
25      android:layout_height="wrap_content"
26      android:layout_marginStart="96dp"
27      android:layout_marginEnd="96dp"
28      android:text="Clear All"
29      app:layout_constraintBottom_toTopOf="@+id/submitButton"
30      app:layout_constraintEnd_toEndOf="parent"
31      app:layout_constraintHorizontal_bias="0.0"
32      app:layout_constraintStart_toStartOf="parent"
33      app:layout_constraintTop_toBottomOf="@+id/phoneField"
34      app:layout_constraintVertical_bias="1.0" />
35
36   <TextView
37      android:id="@+id/textView"
38      android:layout_width="wrap_content"
39      android:layout_height="wrap_content"
40      android:layout_marginTop="48dp"
41      android:text="Patient Registration"
42      android:textSize="28sp"
43      android:textStyle="bold"
44      android:typeface="monospace"
45      app:layout_constraintEnd_toEndOf="parent"
46      app:layout_constraintStart_toStartOf="parent"
```



```

47         app:layout_constraintTop_toTopOf="parent" />
48
49     <TextView
50         android:id="@+id/textView2"
51         android:layout_width="wrap_content"
52         android:layout_height="wrap_content"
53         android:layout_marginStart="8dp"
54         android:layout_marginTop="32dp"
55         android:text="Name"
56         android:textSize="18sp"
57         app:layout_constraintStart_toStartOf="parent"
58         app:layout_constraintTop_toBottomOf="@+id/textView" />
59
60     <TextView
61         android:id="@+id/textView3"
62         android:layout_width="wrap_content"
63         android:layout_height="wrap_content"
64         android:layout_marginStart="8dp"
65         android:layout_marginTop="24dp"
66         android:text="Date of Birth"
67         android:textSize="18sp"
68         app:layout_constraintStart_toStartOf="parent"
69         app:layout_constraintTop_toBottomOf="@+id/textView2" />
70
71     <TextView
72         android:id="@+id/textView4"
73         android:layout_width="wrap_content"
74         android:layout_height="wrap_content"
75         android:layout_marginStart="8dp"
76         android:layout_marginTop="28dp"
77         android:text="Gender"
78         android:textSize="18sp"
79         app:layout_constraintStart_toStartOf="parent"
80         app:layout_constraintTop_toBottomOf="@+id/textView15" />
81
82     <TextView
83         android:id="@+id/textView5"
84         android:layout_width="wrap_content"
85         android:layout_height="wrap_content"
86         android:layout_marginStart="8dp"
87         android:layout_marginTop="24dp"
88         android:text="Marital Status"
89         android:textSize="18sp"
90         app:layout_constraintStart_toStartOf="parent"
91         app:layout_constraintTop_toBottomOf="@+id/textView4" />
92
93     <TextView
94         android:id="@+id/textView7"
95         android:layout_width="wrap_content"
96         android:layout_height="wrap_content"
97         android:layout_marginStart="8dp"

```

```

98     android:layout_marginTop="36dp"
99     android:text="Registration Time"
100    android:textSize="18sp"
101    app:layout_constraintStart_toStartOf="parent"
102    app:layout_constraintTop_toBottomOf="@+id/textView5" />
103
104    <TextView
105        android:id="@+id/textView8"
106        android:layout_width="wrap_content"
107        android:layout_height="wrap_content"
108        android:layout_marginStart="8dp"
109        android:layout_marginTop="36dp"
110        android:text="Addictions"
111        android:textSize="18sp"
112        app:layout_constraintStart_toStartOf="parent"
113        app:layout_constraintTop_toBottomOf="@+id/textView7" />
114
115    <EditText
116        android:id="@+id/nameField"
117        android:layout_width="180dp"
118        android:layout_height="wrap_content"
119        android:layout_marginTop="24dp"
120        android:ems="10"
121        android:inputType="textPersonName"
122        android:textSize="14sp"
123        app:layout_constraintEnd_toEndOf="parent"
124        app:layout_constraintHorizontal_bias="0.542"
125        app:layout_constraintStart_toEndOf="@+id/textView7"
126        app:layout_constraintTop_toBottomOf="@+id/textView" />
127
128    <EditText
129        android:id="@+id/dateField"
130        android:layout_width="180dp"
131        android:layout_height="wrap_content"
132        android:layout_marginTop="8dp"
133        android:ems="10"
134        android:inputType="date"
135        android:textSize="14sp"
136        app:layout_constraintEnd_toEndOf="parent"
137        app:layout_constraintHorizontal_bias="0.542"
138        app:layout_constraintStart_toEndOf="@+id/textView7"
139        app:layout_constraintTop_toBottomOf="@+id/nameField" />
140
141    <RadioGroup
142        android:id="@+id/genderRadioGroup"
143        android:layout_width="180dp"
144        android:layout_height="26dp"
145        android:layout_marginTop="24dp"
146        android:orientation="horizontal"
147        app:layout_constraintEnd_toEndOf="parent"
148        app:layout_constraintHorizontal_bias="0.481"

```

```

149     app:layout_constraintStart_toEndOf="@+id/textView7"
150     app:layout_constraintTop_toBottomOf="@+id/addrField">
151
152     <RadioButton
153         android:id="@+id/maleRadioButton"
154         android:layout_width="90dp"
155         android:layout_height="wrap_content"
156         android:text="Male" />
157
158     <RadioButton
159         android:id="@+id/femaleRadioButton"
160         android:layout_width="90dp"
161         android:layout_height="wrap_content"
162         android:text="Female" />
163 </RadioGroup>
164
165 <Spinner
166     android:id="@+id/maritalList"
167     android:layout_width="180dp"
168     android:layout_height="wrap_content"
169     android:layout_marginTop="24dp"
170     android:entries="@array/marital_items"
171     app:layout_constraintEnd_toEndOf="parent"
172     app:layout_constraintStart_toEndOf="@+id/textView7"
173     app:layout_constraintTop_toBottomOf="@+id/genderRadioGroup" />
174
175 <EditText
176     android:id="@+id/timeField"
177     android:layout_width="180dp"
178     android:layout_height="wrap_content"
179     android:layout_marginTop="24dp"
180     android:ems="10"
181     android:inputType="time"
182     android:textSize="14sp"
183     app:layout_constraintEnd_toEndOf="parent"
184     app:layout_constraintStart_toEndOf="@+id/textView7"
185     app:layout_constraintTop_toBottomOf="@+id/maritalList" />
186
187 <CheckBox
188     android:id="@+id/smokingCheckBox"
189     android:layout_width="wrap_content"
190     android:layout_height="wrap_content"
191     android:layout_marginStart="40dp"
192     android:layout_marginTop="16dp"
193     android:text="Smoking"
194     app:layout_constraintStart_toEndOf="@+id/textView7"
195     app:layout_constraintTop_toBottomOf="@+id/timeField" />
196
197 <CheckBox
198     android:id="@+id/drinkingCheckBox"
199     android:layout_width="wrap_content"

```

```

200     android:layout_height="wrap_content"
201     android:layout_marginTop="16dp"
202     android:text="Drinking"
203     app:layout_constraintEnd_toEndOf="parent"
204     app:layout_constraintHorizontal_bias="0.188"
205     app:layout_constraintStart_toEndOf="@+id/smokingCheckBox"
206     app:layout_constraintTop_toBottomOf="@+id/timeField" />
207
208 <TextView
209     android:id="@+id/textView15"
210     android:layout_width="wrap_content"
211     android:layout_height="wrap_content"
212     android:layout_marginStart="8dp"
213     android:layout_marginTop="36dp"
214     android:text="Address"
215     android:textSize="18sp"
216     app:layout_constraintStart_toStartOf="parent"
217     app:layout_constraintTop_toBottomOf="@+id/textView17" />
218
219 <EditText
220     android:id="@+id/addrField"
221     android:layout_width="180dp"
222     android:layout_height="wrap_content"
223     android:layout_marginTop="12dp"
224     android:ems="10"
225     android:inputType="textPostalAddress"
226     android:textSize="14sp"
227     app:layout_constraintEnd_toEndOf="parent"
228     app:layout_constraintHorizontal_bias="0.542"
229     app:layout_constraintStart_toEndOf="@+id/textView7"
230     app:layout_constraintTop_toBottomOf="@+id/ageField" />
231
232 <TextView
233     android:id="@+id/textView16"
234     android:layout_width="wrap_content"
235     android:layout_height="wrap_content"
236     android:layout_marginStart="8dp"
237     android:layout_marginTop="36dp"
238     android:text="Contact Number"
239     android:textSize="18sp"
240     app:layout_constraintStart_toStartOf="parent"
241     app:layout_constraintTop_toBottomOf="@+id/textView8" />
242
243 <EditText
244     android:id="@+id/phoneField"
245     android:layout_width="180dp"
246     android:layout_height="wrap_content"
247     android:layout_marginTop="16dp"
248     android:ems="10"
249     android:inputType="phone"
250     android:textSize="14sp"

```

```

251     app:layout_constraintEnd_toEndOf="parent"
252     app:layout_constraintStart_toEndOf="@+id/textView7"
253     app:layout_constraintTop_toBottomOf="@+id/smokingCheckBox" />
254
255     <TextView
256         android:id="@+id/textView17"
257         android:layout_width="wrap_content"
258         android:layout_height="wrap_content"
259         android:layout_marginStart="8dp"
260         android:layout_marginTop="28dp"
261         android:text="Age"
262         android:textSize="18sp"
263         app:layout_constraintStart_toStartOf="parent"
264         app:layout_constraintTop_toBottomOf="@+id/textView3" />
265
266     <EditText
267         android:id="@+id/ageField"
268         android:layout_width="180dp"
269         android:layout_height="wrap_content"
270         android:layout_marginTop="12dp"
271         android:ems="10"
272         android:inputType="number"
273         android:textSize="14sp"
274         app:layout_constraintEnd_toEndOf="parent"
275         app:layout_constraintHorizontal_bias="0.542"
276         app:layout_constraintStart_toEndOf="@+id/textView7"
277         app:layout_constraintTop_toBottomOf="@+id/dateField" />
278
279     <ImageView
280         android:id="@+id/imageView"
281         android:layout_width="62dp"
282         android:layout_height="89dp"
283         app:layout_constraintBottom_toBottomOf="parent"
284         app:layout_constraintEnd_toStartOf="@+id/resetButton"
285         app:layout_constraintHorizontal_bias="0.47"
286         app:layout_constraintStart_toStartOf="parent"
287         app:layout_constraintTop_toBottomOf="@+id/phoneField"
288         app:layout_constraintVertical_bias="0.788"
289         app:srcCompat="@drawable/ic_medication_black_24dp" />
290
291     <ImageView
292         android:id="@+id/imageView3"
293         android:layout_width="62dp"
294         android:layout_height="89dp"
295         app:layout_constraintBottom_toBottomOf="parent"
296         app:layout_constraintEnd_toEndOf="parent"
297         app:layout_constraintHorizontal_bias="0.529"
298         app:layout_constraintStart_toEndOf="@+id/resetButton"
299         app:layout_constraintTop_toBottomOf="@+id/phoneField"
300         app:layout_constraintVertical_bias="0.788"
301         app:srcCompat="@drawable/ic_medication_black_24dp" />

```

```
302  
303 </androidx.constraintlayout.widget.ConstraintLayout>
```

Code: Submit Activity Layout

```
1 <?xml version="1.0" encoding="utf-8"?>
2 <androidx.constraintlayout.widget.ConstraintLayout 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
8   <TextView
9       android:id="@+id/textView6"
10      android:layout_width="wrap_content"
11      android:layout_height="wrap_content"
12      android:layout_marginTop="48dp"
13      android:text="Patient Details"
14      android:textSize="28sp"
15      android:textStyle="bold"
16      android:typeface="monospace"
17      app:layout_constraintEnd_toEndOf="parent"
18      app:layout_constraintStart_toStartOf="parent"
19      app:layout_constraintTop_toTopOf="parent" />
20
21   <TextView
22       android:id="@+id/textView9"
23       android:layout_width="wrap_content"
24       android:layout_height="wrap_content"
25       android:layout_marginStart="8dp"
26       android:layout_marginTop="32dp"
27       android:text="Name"
28       android:textSize="18sp"
29       app:layout_constraintStart_toStartOf="parent"
30       app:layout_constraintTop_toBottomOf="@+id/textView6" />
31
32   <TextView
33       android:id="@+id/textView10"
34       android:layout_width="wrap_content"
35       android:layout_height="wrap_content"
36       android:layout_marginStart="8dp"
37       android:layout_marginTop="24dp"
38       android:text="Date of Birth"
39       android:textSize="18sp"
40       app:layout_constraintStart_toStartOf="parent"
41       app:layout_constraintTop_toBottomOf="@+id/textView9" />
42
43   <TextView
44       android:id="@+id/textView11"
45       android:layout_width="wrap_content"
46       android:layout_height="wrap_content"
```

```

47         android:layout_marginStart="8dp"
48         android:layout_marginTop="24dp"
49         android:text="Gender"
50         android:textSize="18sp"
51         app:layout_constraintStart_toStartOf="parent"
52         app:layout_constraintTop_toBottomOf="@+id/addressText" />
53
54     <TextView
55         android:id="@+id/textView12"
56         android:layout_width="wrap_content"
57         android:layout_height="wrap_content"
58         android:layout_marginStart="8dp"
59         android:layout_marginTop="24dp"
60         android:text="Marital Status"
61         android:textSize="18sp"
62         app:layout_constraintStart_toStartOf="parent"
63         app:layout_constraintTop_toBottomOf="@+id/textView11" />
64
65     <TextView
66         android:id="@+id/textView13"
67         android:layout_width="wrap_content"
68         android:layout_height="wrap_content"
69         android:layout_marginStart="8dp"
70         android:layout_marginTop="24dp"
71         android:text="Registration Time"
72         android:textSize="18sp"
73         app:layout_constraintStart_toStartOf="parent"
74         app:layout_constraintTop_toBottomOf="@+id/textView12" />
75
76     <TextView
77         android:id="@+id/textView14"
78         android:layout_width="wrap_content"
79         android:layout_height="wrap_content"
80         android:layout_marginStart="8dp"
81         android:layout_marginTop="24dp"
82         android:text="Addictions"
83         android:textSize="18sp"
84         app:layout_constraintStart_toStartOf="parent"
85         app:layout_constraintTop_toBottomOf="@+id/textView13" />
86
87     <TextView
88         android:id="@+id/nameText"
89         android:layout_width="wrap_content"
90         android:layout_height="wrap_content"
91         android:layout_marginTop="32dp"
92         android:width="180dp"
93         android:textSize="18sp"
94         app:layout_constraintEnd_toEndOf="parent"
95         app:layout_constraintStart_toEndOf="@+id/textView13"
96         app:layout_constraintTop_toBottomOf="@+id/textView6" />
97

```



```

98     <TextView
99         android:id="@+id/dateText "
100         android:layout_width="wrap_content "
101         android:layout_height="wrap_content "
102         android:layout_marginTop="24dp"
103         android:width="180dp"
104         android:textSize="18sp"
105         app:layout_constraintEnd_toEndOf="parent "
106         app:layout_constraintStart_toEndOf="@+id/textView13"
107         app:layout_constraintTop_toBottomOf="@+id/nameText " />
108
109     <TextView
110         android:id="@+id/genderText "
111         android:layout_width="wrap_content "
112         android:layout_height="wrap_content "
113         android:layout_marginTop="24dp"
114         android:width="180dp"
115         android:textSize="18sp"
116         app:layout_constraintEnd_toEndOf="parent "
117         app:layout_constraintHorizontal_bias="0.501 "
118         app:layout_constraintStart_toEndOf="@+id/textView13"
119         app:layout_constraintTop_toBottomOf="@+id/addressText " />
120
121     <TextView
122         android:id="@+id/maritalText "
123         android:layout_width="wrap_content "
124         android:layout_height="wrap_content "
125         android:layout_marginTop="24dp"
126         android:width="180dp"
127         android:textSize="18sp"
128         app:layout_constraintEnd_toEndOf="parent "
129         app:layout_constraintStart_toEndOf="@+id/textView13"
130         app:layout_constraintTop_toBottomOf="@+id/genderText " />
131
132     <TextView
133         android:id="@+id/timeText "
134         android:layout_width="wrap_content "
135         android:layout_height="wrap_content "
136         android:layout_marginTop="24dp"
137         android:width="180dp"
138         android:textSize="18sp"
139         app:layout_constraintEnd_toEndOf="parent "
140         app:layout_constraintStart_toEndOf="@+id/textView13"
141         app:layout_constraintTop_toBottomOf="@+id/maritalText " />
142
143     <TextView
144         android:id="@+id/addictionsText "
145         android:layout_width="wrap_content "
146         android:layout_height="wrap_content "
147         android:layout_marginTop="24dp"
148         android:width="180dp"

```

```

149         android:textSize="18sp"
150         app:layout_constraintEnd_toEndOf="parent"
151         app:layout_constraintStart_toEndOf="@+id/textView13"
152         app:layout_constraintTop_toBottomOf="@+id/timeText" />
153
154     <ImageView
155         android:id="@+id/imageView4"
156         android:layout_width="62dp"
157         android:layout_height="89dp"
158         app:layout_constraintBottom_toBottomOf="parent"
159         app:layout_constraintEnd_toEndOf="parent"
160         app:layout_constraintHorizontal_bias="0.025"
161         app:layout_constraintStart_toStartOf="parent"
162         app:layout_constraintTop_toBottomOf="@+id/additionsText"
163         app:layout_constraintVertical_bias="0.935"
164         app:srcCompat="@drawable/ic_masks_black_24dp" />
165
166     <ImageView
167         android:id="@+id/imageView2"
168         android:layout_width="62dp"
169         android:layout_height="89dp"
170         app:layout_constraintBottom_toBottomOf="parent"
171         app:layout_constraintEnd_toEndOf="parent"
172         app:layout_constraintHorizontal_bias="0.948"
173         app:layout_constraintStart_toStartOf="parent"
174         app:layout_constraintTop_toBottomOf="@+id/additionsText"
175         app:layout_constraintVertical_bias="0.934"
176         app:srcCompat="@drawable/ic_masks_black_24dp" />
177
178     <TextView
179         android:id="@+id/textView19"
180         android:layout_width="wrap_content"
181         android:layout_height="wrap_content"
182         android:layout_marginStart="8dp"
183         android:layout_marginTop="24dp"
184         android:text="Age"
185         android:textSize="18sp"
186         app:layout_constraintStart_toStartOf="parent"
187         app:layout_constraintTop_toBottomOf="@+id/textView10" />
188
189     <TextView
190         android:id="@+id/ageText"
191         android:layout_width="wrap_content"
192         android:layout_height="wrap_content"
193         android:layout_marginTop="24dp"
194         android:width="180dp"
195         android:textSize="18sp"
196         app:layout_constraintEnd_toEndOf="parent"
197         app:layout_constraintHorizontal_bias="0.501"
198         app:layout_constraintStart_toEndOf="@+id/textView13"
199         app:layout_constraintTop_toBottomOf="@+id/dateText" />

```

```

200
201 <TextView
202     android:id="@+id/textView21"
203     android:layout_width="wrap_content"
204     android:layout_height="wrap_content"
205     android:layout_marginStart="8dp"
206     android:layout_marginTop="24dp"
207     android:text="Address"
208     android:textSize="18sp"
209     app:layout_constraintStart_toStartOf="parent"
210     app:layout_constraintTop_toBottomOf="@+id/textView19" />
211
212 <TextView
213     android:id="@+id/addressText"
214     android:layout_width="wrap_content"
215     android:layout_height="wrap_content"
216     android:layout_marginTop="24dp"
217     android:width="180dp"
218     android:ellipsize="none"
219     android:maxLines="5"
220     android:scrollHorizontally="false"
221     android:textSize="18sp"
222     app:layout_constraintEnd_toEndOf="parent"
223     app:layout_constraintStart_toEndOf="@+id/textView13"
224     app:layout_constraintTop_toBottomOf="@+id/ageText" />
225
226 <TextView
227     android:id="@+id/textView23"
228     android:layout_width="wrap_content"
229     android:layout_height="wrap_content"
230     android:layout_marginStart="8dp"
231     android:layout_marginTop="24dp"
232     android:text="Contact Number"
233     android:textSize="18sp"
234     app:layout_constraintStart_toStartOf="parent"
235     app:layout_constraintTop_toBottomOf="@+id/textView14" />
236
237 <TextView
238     android:id="@+id/phoneText"
239     android:layout_width="wrap_content"
240     android:layout_height="wrap_content"
241     android:layout_marginTop="24dp"
242     android:width="180dp"
243     android:textSize="18sp"
244     app:layout_constraintEnd_toEndOf="parent"
245     app:layout_constraintStart_toEndOf="@+id/textView13"
246     app:layout_constraintTop_toBottomOf="@+id/additionsText" />
247
248 <ImageView
249     android:id="@+id/imageView5"
250     android:layout_width="122dp"

```

```
251     android:layout_height="124dp"
252     app:layout_constraintBottom_toBottomOf="parent"
253     app:layout_constraintEnd_toStartOf="@+id/imageView2"
254     app:layout_constraintHorizontal_bias="0.492"
255     app:layout_constraintStart_toEndOf="@+id/imageView4"
256     app:layout_constraintTop_toBottomOf="@+id/phoneText"
257     app:layout_constraintVertical_bias="0.802"
258     app:srcCompat="@drawable/ic_info_black_24dp" />
259
260 </androidx.constraintlayout.widget.ConstraintLayout>
```

Output: Empty Form:

Figure 1: Output: Empty Form.

Patient Registration

Patient Registration

Name

Date of Birth

Age

Address


Gender ☐ Male ☐ Female

Marital Status ▼

Registration Time


Addictions ☐ Smoking ☐ Drinking

Contact Number



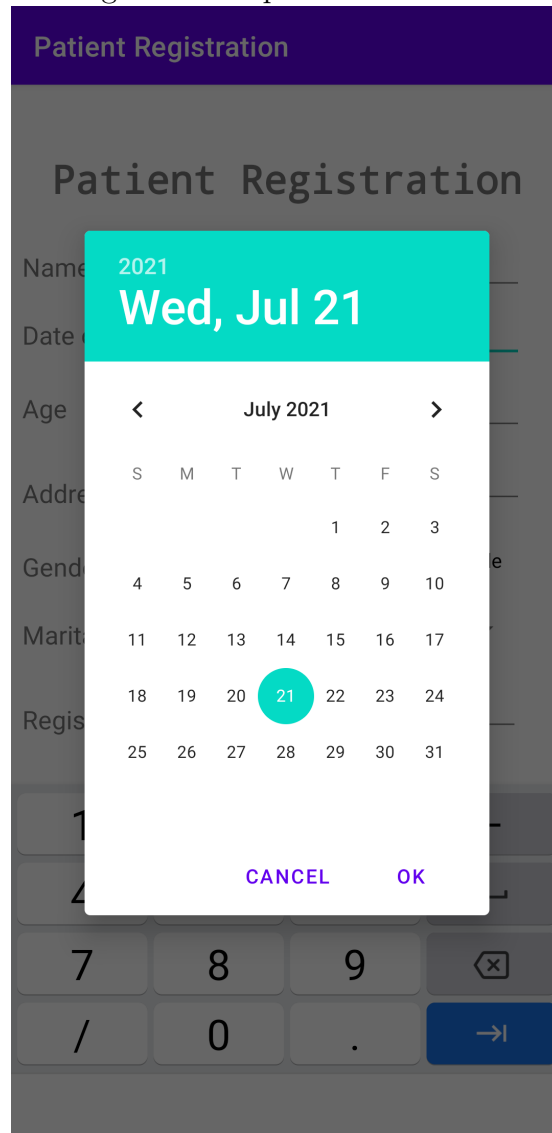
CLEAR ALL

SUBMIT



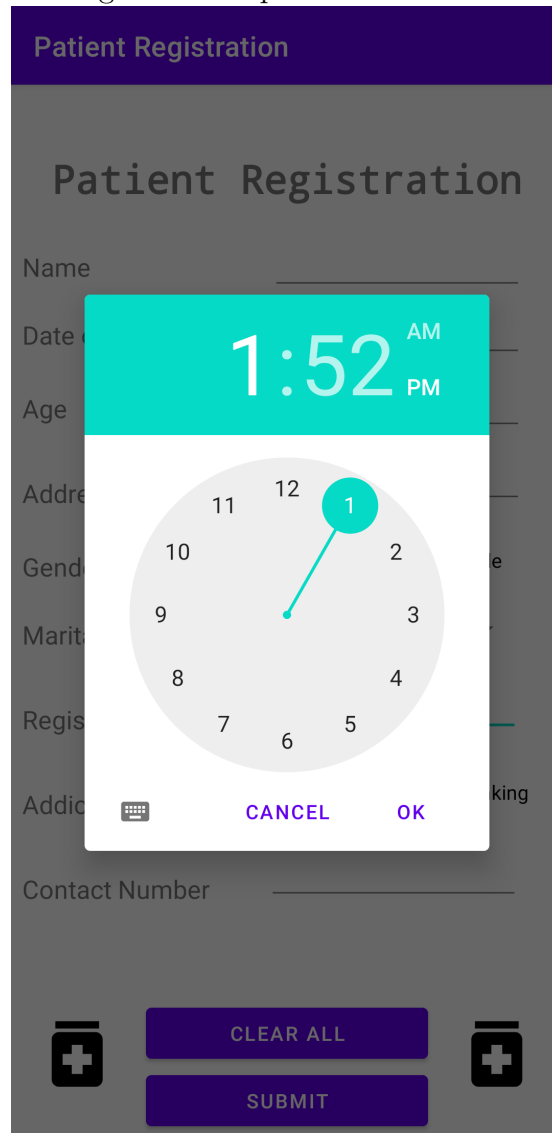
Output: Date Picker:

Figure 2: Output: Date Picker.



Output: Time Picker:

Figure 3: Output: Time Picker.




Output: Filled Form:

Figure 4: Output: Filled Form.

Patient Registration


Patient Registration

Name	Jarvis Johnson
Date of Birth	05/05/1992
Age	29
Address	University Campus, Atlanta
Gender	<input checked="" type="radio"/> Male <input type="radio"/> Female
Marital Status	Single ▼
Registration Time	18:14:32
Addictions	<input checked="" type="checkbox"/> Smoking <input checked="" type="checkbox"/> Drinking
Contact Number	9903695423



CLEAR ALL

SUBMIT



Output: Submitted Form:

Figure 5: Output: Submitted Form.

Patient Registration

Patient Details

Name	Jarvis Johnson
Date of Birth	05/05/1992
Age	29
Address	Georgia Tech University Campus, Atlanta
Gender	Male
Marital Status	Single
Registration Time	18:14:32
Addictions	Smoking, Drinking
Contact Number	9903695423



Learning Outcome:

- I was able to install **Android Studio IDE** and create a new project.
- I understood how to code a simple form with **GUI components** using Java and XML.
- I understood how to use the design window to design the front-end GUI layout without requiring to write XML code to do the same.
- I used multiple GUI components like **TextView, ImageView, Button, PlainText, Phone, PostalAddress, Number, RadioButton, CheckBox, RadioGroup, Date & Time.**
- I understood how to use **Constraint Layout** for basic front-end development.
- I understood how the usage of **Spinner** to create a drop-down list and I was able to populate it with a custom-defined list with the help of **strings.xml**
- I implemented **onClickListener** events to the buttons to perform required form actions.
- I understood the usage of **Intent** to transfer data from one Activity to another.
- I understood how to call a new Activity from existing Activity using the help of Intent.
- I was able to store and extract form data using Intent and display it on a new Activity.
- I was able to display a **Date Picker** and **Time Picker** component to easily enter the date and time fields in the registration form respectively.
- I configured different **font styles, font sizes and colors** for different UI elements with the element's design attributes.
- I was able to develop and run a basic **Android application** on my computer and also export it to my phone as an **APK file** and use it from my mobile device.