

# Department of CSE

## SSN College of Engineering

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### UCS 1711 - Mobile Application Development Lab

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#### 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.MotionEvent;
10 import android.view.View;
11 import android.widget.Button;
12 import android.widget.CheckBox;
13 import android.widget.DatePicker;
14 import android.widget.EditText;
15 import android.widget.RadioButton;
16 import android.widget.RadioGroup;
17 import android.widget.Spinner;
18 import android.widget.TimePicker;
19
20 import java.util.Calendar;
21
22 public class MainActivity extends AppCompatActivity {
23
24     @Override
25     protected void onCreate(Bundle savedInstanceState) {
26         super.onCreate(savedInstanceState);
27         setContentView(R.layout.activity_main);
28
29         final EditText nameField = findViewById(R.id.nameField);
30         final EditText dateField = findViewById(R.id.dateField);
31         final RadioGroup genderGroup = findViewById(R.id.genderRadioGroup)
32     ;
33         final Spinner maritalList = findViewById(R.id.maritalList);
34         final EditText timeField = findViewById(R.id.timeField);
35         final CheckBox smokingCheck = findViewById(R.id.smokingCheckBox);
36         final CheckBox drinkingCheck = findViewById(R.id.drinkingCheckBox)
37     ;
38         final EditText ageField = findViewById(R.id.ageField);
39         final EditText phoneField = findViewById(R.id.phoneField);
40         final EditText addressField = findViewById(R.id.addrField);
41         final Button clearButton = findViewById(R.id.resetButton);
42         final Button submitButton = findViewById(R.id.submitButton);
43
44         //Calendar instance for the DatePicker & TimePicker
45         final Calendar calendar = Calendar.getInstance();
```

```

46         dateField.setOnFocusChangeListener(new View.OnFocusChangeListener
47         () {
48             @Override
49             public void onFocusChange(View v, boolean hasFocus) {
50                 if(hasFocus){
51                     int day = calendar.get(Calendar.DAY_OF_MONTH);
52                     int month = calendar.get(Calendar.MONTH);
53                     int year = calendar.get(Calendar.YEAR);
54
55                     //Date Picker Dialog
56                     DatePickerDialog datePicker = new DatePickerDialog(
57                     MainActivity.this, new DatePickerDialog.OnDateSetListener() {
58                         @Override
59                         public void onDateSet(DatePicker view, int year,
60                         int month, int dayOfMonth) {
61                             dateField.setText(dayOfMonth + "/" + (month +
62                             1) + "/" + year);
63                         }
64                     }, year, month, day);
65                     datePicker.show();
66                 }
67             });
68
69         timeField.setOnFocusChangeListener(new View.OnFocusChangeListener
70         () {
71             @Override
72             public void onFocusChange(View v, boolean hasFocus) {
73                 if(hasFocus){
74                     int hour = calendar.get(Calendar.HOUR_OF_DAY);
75                     int minutes = calendar.get(Calendar.MINUTE);
76
77                     //Time Picker Dialog
78                     TimePickerDialog timePicker = new TimePickerDialog(
79                     MainActivity.this, new TimePickerDialog.OnTimeSetListener() {
80                         @Override
81                         public void onTimeSet(TimePicker view, int
82                         hourOfDay, int minute) {
83                             timeField.setText(hourOfDay + ":" + minute);
84                         }
85                     }, hour, minutes, false);
86                     timePicker.show();
87                 }
88             });
89
90         submitButton.setOnClickListener(new View.OnClickListener() {
91             //define event for onClick of Submit Button
92             @Override
93             public void onClick(View v) {

```

```

90         String patientName = nameField.getText().toString();
91         String patientDate = dateField.getText().toString();
92         String patientGender = "Not Selected";
93
94         int selectedId = genderGroup.getCheckedRadioButtonId();
95
96         if(selectedId > 0){
97             RadioButton selectedRadioBtn = (RadioButton)
findViewById(selectedId);
98             patientGender = selectedRadioBtn.getText().toString();
99         }
100
101         String patientMarital = maritalList.getSelectedItem().
toString();
102
103         String patientTime = timeField.getText().toString();
104         String patientAddictions = "";
105
106         if(smokingCheck.isChecked() && drinkingCheck.isChecked()){
107             patientAddictions += "Smoking, Drinking";
108         }
109
110         else if(drinkingCheck.isChecked()){
111             patientAddictions += "Drinking";
112         }
113
114         else if(smokingCheck.isChecked()){
115             patientAddictions += "Smoking";
116         }
117
118         else{
119             patientAddictions += "-NIL-";
120         }
121
122         String patientPhone = phoneField.getText().toString();
123         String patientAddress = addressField.getText().toString();
124         int patientAge = Integer.parseInt(ageField.getText().
toString());
125
126         //Transfer the contents to the SubmitActivity class using
an Intent
127         Intent submitIntent = new Intent(getApplicationContext(),
SubmitActivity.class);
128         submitIntent.putExtra("patientName", patientName);
129         submitIntent.putExtra("patientDate", patientDate);
130         submitIntent.putExtra("patientGender", patientGender);
131         submitIntent.putExtra("patientMarital", patientMarital);
132         submitIntent.putExtra("patientTime", patientTime);
133         submitIntent.putExtra("patientAddictions",
patientAddictions);
134         submitIntent.putExtra("patientAge", patientAge);
135         submitIntent.putExtra("patientPhone", patientPhone);

```

```

135         submitIntent.putExtra("patientAddress", patientAddress);
136
137         startActivity(submitIntent);
138     }
139 });
140
141 clearButton.setOnClickListener(new View.OnClickListener() {
142     //define event for onClick of Clear All Button
143     @Override
144     public void onClick(View v) {
145         nameField.setText("");
146         dateField.setText("");
147         genderGroup.clearCheck();
148         maritalList.setSelection(0);
149         timeField.setText("");
150         smokingCheck.setChecked(false);
151         drinkingCheck.setChecked(false);
152         ageField.setText("");
153         addressField.setText("");
154         phoneField.setText("");
155     }
156 });
157
158 }
159 }

```

## 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



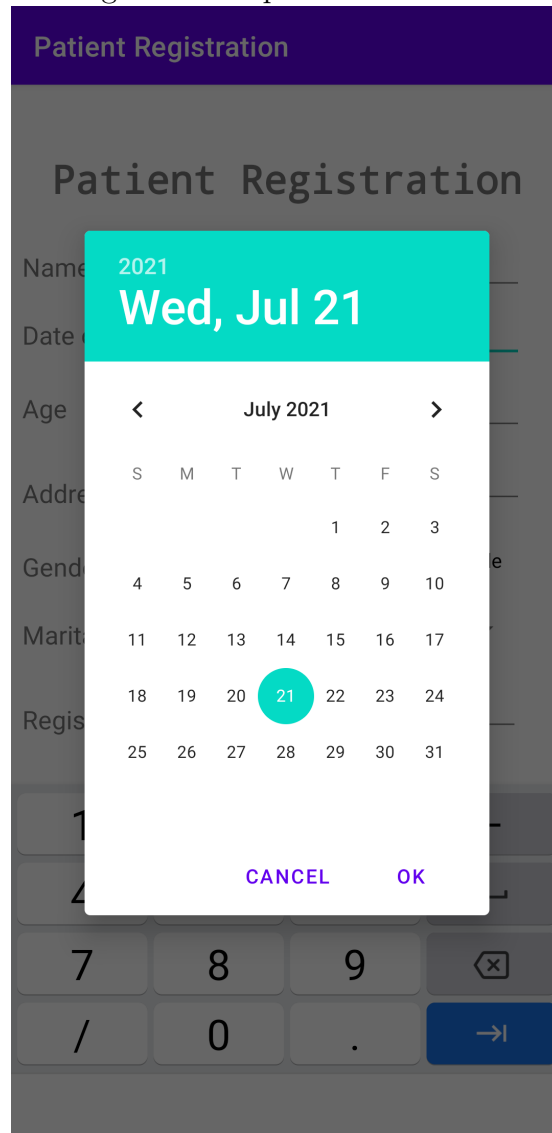
CLEAR ALL

SUBMIT



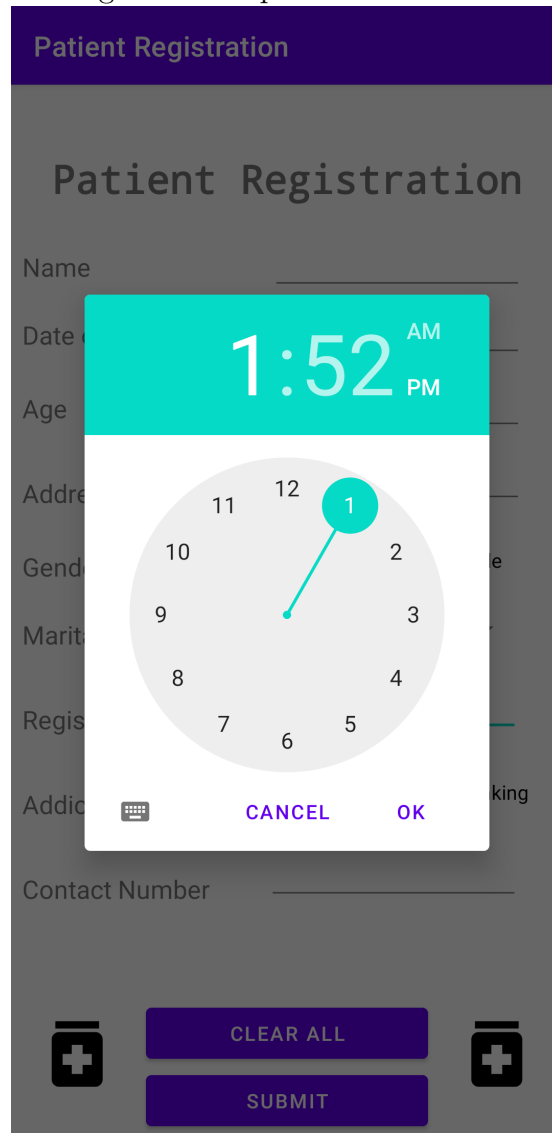
## Output: Date Picker:

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.