

2. Development of Hello World Application

MainActivity.java

```
import androidx.appcompat.app.AppCompatActivity;

import android.os.Bundle;

public class MainActivity extends AppCompatActivity {

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

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:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:text="Hello World!"
        app:layout_constraintBottom_toBottomOf="parent"
        app:layout_constraintEnd_toEndOf="parent"
        app:layout_constraintStart_toStartOf="parent"
        app:layout_constraintTop_toTopOf="parent" />

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

3. Create An Application that takes the name, from a textbox, and shows hello message along with name entered in textbox, when the user clicks the OK button

MainActivity.java

```
import androidx.appcompat.app.AppCompatActivity;
import android.os.Bundle;
import android.view.View;
import android.widget.Button;
import android.widget.EditText;
import android.widget.TextView;

public class MainActivity extends AppCompatActivity {

    private EditText nameEditText;
```

```

private Button okButton;
private TextView helloTextView;

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

    nameEditText = findViewById(R.id.name_edit_text);
    okButton = findViewById(R.id.ok_button);
    helloTextView = findViewById(R.id.hello_text_view);

    okButton.setOnClickListener(new View.OnClickListener() {
        @Override
        public void onClick(View view) {
            String name = nameEditText.getText().toString();
            helloTextView.setText("Hello, " + name);
        }
    });
}
}

```

Activitymain.xml

```

<LinearLayout xmlns:android="http://schemas.android.com/apk/res/android"
    xmlns:tools="http://schemas.android.com/tools"
    android:layout_width="match_parent"
    android:layout_height="match_parent"
    android:gravity="center"
    android:orientation="vertical"
    tools:context=".MainActivity">

    <EditText
        android:id="@+id/name_edit_text"
        android:layout_width="match_parent"
        android:layout_height="wrap_content"
        android:hint="Enter your name"/>

    <Button
        android:id="@+id/ok_button"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:text="OK"/>

    <TextView
        android:id="@+id/hello_text_view"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:textSize="30sp"/>

</LinearLayout>

```

4. Create a screen that has input boxes for user name, password, address, gender(Radio Buttons for male and female), age (Numeric), DOB(Date Picket), State (Spinner), and a submit button. On clicking the submit button, print all the data below the submit button (Use any Layout)

MainActivity.java

```
import androidx.appcompat.app.AppCompatActivity;
import android.os.Bundle;
import android.view.View;
import android.widget.Button;
import android.widget.EditText;
import android.widget.RadioButton;
import android.widget.RadioGroup;
import android.widget.Spinner;
import android.widget.TextView;

public class MainActivity extends AppCompatActivity implements
View.OnClickListener {

    EditText etUserName, etPassword, etAddress, etAge;
    RadioGroup rgGender;
    RadioButton rbMale, rbFemale;
    Button btnDOB, btnSubmit;
    Spinner spinnerState;
    TextView tvResult;

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

        etUserName = findViewById(R.id.etUserName);
        etPassword = findViewById(R.id.etPassword);
        etAddress = findViewById(R.id.etAddress);
        etAge = findViewById(R.id.etAge);
        rgGender = findViewById(R.id.rgGender);
        rbMale = findViewById(R.id.rbMale);
        rbFemale = findViewById(R.id.rbFemale);
        btnDOB = findViewById(R.id.btnDOB);
        btnSubmit = findViewById(R.id.btnSubmit);
        spinnerState = findViewById(R.id.spinnerState);
        tvResult = findViewById(R.id.tvResult);

        btnSubmit.setOnClickListener(this);
    }

    @Override
    public void onClick(View v) {
        if (v.getId() == R.id.btnSubmit) {
            String userName = etUserName.getText().toString();
            String password = etPassword.getText().toString();
            String address = etAddress.getText().toString();
            String age = etAge.getText().toString();
            String gender = "";
            if (rbMale.isChecked()) {
                gender = "Male";
            } else if (rbFemale.isChecked()) {
                gender = "Female";
            }
        }
    }
}
```

```

    }
    String dob = btnDOB.getText().toString();
    String state = spinnerState.getSelectedItem().toString();

    tvResult.setText("User Name: " + userName + "\n" +
        "Password: " + password + "\n" +
        "Address: " + address + "\n" +
        "Age: " + age + "\n" + "Gender: " + gender + "\n" +
        "Date of Birth: " + dob + "\n" +
        "State: " + state);
    }
}
}

```

Activitymain.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:orientation="vertical">

    <TextView
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:text="User Name" />

    <EditText
        android:id="@+id/etUserName"
        android:layout_width="match_parent"
        android:layout_height="wrap_content" />

    <TextView
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:text="Password" />

    <EditText
        android:id="@+id/etPassword"
        android:layout_width="match_parent"
        android:layout_height="wrap_content"
        android:inputType="textPassword" />

    <TextView
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:text="Address" />

    <EditText
        android:id="@+id/etAddress"
        android:layout_width="match_parent"
        android:layout_height="wrap_content" />

    <RadioGroup
        android:id="@+id/rgGender"
        android:layout_width="match_parent"
        android:layout_height="wrap_content">

        <RadioButton

```

```
        android:id="@+id/rbMale"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:text="Male" />

        <RadioButton
            android:id="@+id/rbFemale"
            android:layout_width="wrap_content"
            android:layout_height="wrap_content"
            android:text="Female" />
    </RadioGroup>

    <TextView
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:text="Age" />

    <EditText
        android:id="@+id/etAge"
        android:layout_width="match_parent"
        android:layout_height="wrap_content"
        android:inputType="number" />

    <TextView
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:text="Date of Birth" />

    <Button
        android:id="@+id/btnDOB"
        android:layout_width="match_parent"
        android:layout_height="wrap_content"
        android:text="Select Date of Birth" />

    <TextView
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:text="State" />

    <Spinner
        android:id="@+id/spinnerState"
        android:layout_width="match_parent"
        android:layout_height="wrap_content" />

    <Button
        android:id="@+id/btnSubmit"
        android:layout_width="match_parent"
        android:layout_height="wrap_content"
        android:text="Submit" />

    <TextView
        android:id="@+id/tvResult"
        android:layout_width="match_parent"
        android:layout_height="wrap_content" />
</LinearLayout>
```

Strings.xml

```
<resources>
    <string name="app_name">labexp4</string>
    <string-array name="states">
        <item>Telangana</item>
        <item>Andhra Pradesh</item>
        <item>Delhi</item>
        <item>Kerala</item>
        <!-- Add more states as needed -->
    </string-array>
</resources>
```

Mid Question:

Develop the registration form with the following UI components name, Email Id, Password, Confirm Password, Mobile Number, Gender and Register Button

MainActivity.java

```
import android.os.Bundle;
import android.view.View;
import android.widget.Button;
import android.widget.EditText;
import android.widget.RadioButton;
import android.widget.RadioGroup;
import android.widget.TextView;

import androidx.appcompat.app.AppCompatActivity;

public class MainActivity extends AppCompatActivity {

    private EditText etName, etEmail, etPassword, etConfirmPassword,
etMobileNumber;
    private RadioGroup rgGender;
    private Button btnRegister, btnReset;
    private TextView tvOutput;

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

        etName = findViewById(R.id.et_name);
        etEmail = findViewById(R.id.et_email);
        etPassword = findViewById(R.id.et_password);
        etConfirmPassword = findViewById(R.id.et_confirm_password);
        etMobileNumber = findViewById(R.id.et_mobile_number);
        rgGender = findViewById(R.id.rg_gender);
        btnRegister = findViewById(R.id.btn_register);
        btnReset = findViewById(R.id.btn_reset);
        tvOutput = findViewById(R.id.tv_output);

        btnRegister.setOnClickListener(new View.OnClickListener() {
            @Override
```

```

        public void onClick(View view) {
            String name = etName.getText().toString();
            String email = etEmail.getText().toString();
            String password = etPassword.getText().toString();
            String confirmPassword =
etConfirmPassword.getText().toString();
            String mobileNumber = etMobileNumber.getText().toString();
            String gender = "";

            int selectedGenderId = rgGender.getCheckedRadioButtonId();
            if (selectedGenderId != -1) {
                RadioButton selectedGenderRadioButton =
findViewById(selectedGenderId);
                gender =
selectedGenderRadioButton.getText().toString();
            }

            String output = "Name: " + name + "\nEmail: " + email +
"\nPassword: " + password
                + "\nConfirm Password: " + confirmPassword +
"\nMobile Number: " + mobileNumber
                + "\nGender: " + gender;

            tvOutput.setText(output);
        }
    });

    btnReset.setOnClickListener(new View.OnClickListener() {
        @Override
        public void onClick(View view) {
            etName.setText("");
            etEmail.setText("");
            etPassword.setText("");
            etConfirmPassword.setText("");
            etMobileNumber.setText("");
            rgGender.clearCheck();
            tvOutput.setText("");
        }
    });
}
}

```

activity_main.xml

```

<?xml version="1.0" encoding="utf-8"?>
<LinearLayout
    xmlns:android="http://schemas.android.com/apk/res/android"
    android:id="@+id/main_layout"
    android:layout_width="match_parent"
    android:layout_height="match_parent"
    android:orientation="vertical"
    android:padding="16dp">

    <EditText
        android:id="@+id/et_name"
        android:layout_width="match_parent"
        android:layout_height="wrap_content"
        android:hint="Name" />

```

```
<EditText
    android:id="@+id/et_email"
    android:layout_width="match_parent"
    android:layout_height="wrap_content"
    android:inputType="textEmailAddress"
    android:hint="Email" />

<EditText
    android:id="@+id/et_password"
    android:layout_width="match_parent"
    android:layout_height="wrap_content"
    android:inputType="textPassword"
    android:hint="Password" />

<EditText
    android:id="@+id/et_confirm_password"
    android:layout_width="match_parent"
    android:layout_height="wrap_content"
    android:inputType="textPassword"
    android:hint="Confirm Password" />

<EditText
    android:id="@+id/et_mobile_number"
    android:layout_width="match_parent"
    android:layout_height="wrap_content"
    android:inputType="phone"
    android:hint="Mobile Number" />

<RadioGroup
    android:id="@+id/rg_gender"
    android:layout_width="match_parent"
    android:layout_height="wrap_content"
    android:orientation="horizontal"
    android:paddingTop="16dp">

    <RadioButton
        android:id="@+id/rb_male"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:text="Male" />

    <RadioButton
        android:id="@+id/rb_female"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:text="Female" />

    <RadioButton
        android:id="@+id/rb_other"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:text="Other" />

</RadioGroup>

<Button
    android:id="@+id/btn_register"
    android:layout_width="match_parent"
    android:layout_height="wrap_content"
    android:text="Register" />
```



```
<Button
    android:id="@+id/btn_reset"
    android:layout_width="match_parent"
    android:layout_height="wrap_content"
    android:text="Reset" />

<TextView
    android:id="@+id/tv_output"
    android:layout_width="match_parent"
    android:layout_height="wrap_content"
    android:textSize="18sp"
    android:textStyle="bold"
    android:paddingTop="16dp" />

</LinearLayout>
```