Slip 2

Q.1) Create an application that allows the user to enter a number in the textbox. Check whether the number in the textbox is perfect number or not. Print the message using Toast control.

XML Main Activity File

<?*xml version*="1.0" *encoding*="utf-8"?>  
<RelativeLayout *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/resultTextView"  
 *android:layout\_width*="wrap\_content"  
 *android:layout\_height*="wrap\_content"  
 *android:layout\_centerHorizontal*="true"  
 *android:layout\_marginTop*="32dp"  
 *android:text*=""  
 *android:textSize*="18sp" />  
  
 <EditText  
 *android:id*="@+id/numberInputEditText"  
 *android:layout\_width*="match\_parent"  
 *android:layout\_height*="wrap\_content"  
 *android:layout\_below*="@id/resultTextView"  
 *android:layout\_marginStart*="32dp"  
 *android:layout\_marginTop*="32dp"  
 *android:layout\_marginEnd*="32dp"  
 *android:hint*="Enter a number"  
 *android:inputType*="number" />  
  
 <Button  
 *android:id*="@+id/checkButton"  
 *android:layout\_width*="wrap\_content"  
 *android:layout\_height*="wrap\_content"  
 *android:layout\_below*="@id/numberInputEditText"  
 *android:layout\_centerHorizontal*="true"  
 *android:layout\_marginTop*="32dp"  
 *android:text*="Check" />  
  
</RelativeLayout>

Java Main File

*package* com.example.slip2a;  
  
*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;  
*import* android.widget.Toast;  
  
*import* androidx.appcompat.app.AppCompatActivity;  
  
*public class* MainActivity *extends* AppCompatActivity {  
  
 *private* TextView resultTextView;  
 *private* EditText numberInputEditText;  
 *private* Button checkButton;  
  
 @Override  
 *protected void* onCreate(Bundle savedInstanceState) {  
 *super*.onCreate(savedInstanceState);  
 setContentView(R.layout.*activity\_main*);  
  
 resultTextView = findViewById(R.id.*resultTextView*);  
 numberInputEditText = findViewById(R.id.*numberInputEditText*);  
 checkButton = findViewById(R.id.*checkButton*);  
  
 checkButton.setOnClickListener(*new* View.OnClickListener() {  
 @Override  
 *public void* onClick(View v) {  
 String numberString = numberInputEditText.getText().toString();  
 *if* (numberString.isEmpty()) {  
 showToast("Please enter a number.");  
 *return*;  
 }  
  
 *int* number = Integer.*parseInt*(numberString);  
 *if* (isPerfectNumber(number)) {  
 showToast(number + " is a perfect number.");  
 } *else* {  
 showToast(number + " is not a perfect number.");  
 }  
 }  
 });  
 }  
  
 *// Function to check whether a number is a perfect number  
 private boolean* isPerfectNumber(*int* number) {  
 *int* sum = 1;  
 *for* (*int* i = 2; i \* i <= number; i++) {  
 *if* (number % i == 0) {  
 sum += i;  
 *if* (i != number / i) {  
 sum += number / i;  
 }  
 }  
 }  
 *return* sum == number && number != 1;  
 }  
  
 *// Function to display a Toast message  
 private void* showToast(String message) {  
 Toast.*makeText*(*this*, message, Toast.***LENGTH\_SHORT***).show();  
 }  
}

Q.2) Java Android Program to perform all arithmetic Operations using Calculator.

XML Main Activity File

<?*xml version*="1.0" *encoding*="utf-8"?>  
<RelativeLayout *xmlns:android*="http://schemas.android.com/apk/res/android"  
 *android:layout\_width*="match\_parent"  
 *android:layout\_height*="match\_parent"  
 *xmlns:tools*="http://schemas.android.com/tools"  
 *tools:context*=".MainActivity">  
  
 <TextView  
 *android:id*="@+id/display"  
 *android:layout\_width*="match\_parent"  
 *android:layout\_height*="wrap\_content"  
 *android:layout\_marginStart*="8dp"  
 *android:layout\_marginTop*="8dp"  
 *android:layout\_marginEnd*="8dp"  
 *android:layout\_marginBottom*="8dp"  
 *android:background*="@android:color/white"  
 *android:elevation*="4dp"  
 *android:gravity*="end"  
 *android:padding*="8dp"  
 *android:textColor*="@android:color/black"  
 *android:textSize*="24sp" />  
  
 <GridLayout  
 *android:layout\_width*="match\_parent"  
 *android:layout\_height*="wrap\_content"  
 *android:layout\_below*="@id/display"  
 *android:rowCount*="5"  
 *android:columnCount*="4"  
 *android:padding*="8dp"  
 *android:layout\_marginTop*="8dp">  
  
 *<!-- Number Buttons -->* <Button  
 *android:id*="@+id/btn7"  
 *android:text*="7"  
 *android:layout\_column*="0"  
 *android:layout\_row*="0"  
 *android:layout\_columnWeight*="1"  
 *android:layout\_rowWeight*="1"  
 *android:layout\_width*="0dp"/>  
 <Button  
 *android:id*="@+id/btn8"  
 *android:text*="8"  
 *android:layout\_column*="1"  
 *android:layout\_row*="0"  
 *android:layout\_columnWeight*="1"  
 *android:layout\_rowWeight*="1"  
 *android:layout\_width*="0dp"/>  
 <Button  
 *android:id*="@+id/btn9"  
 *android:text*="9"  
 *android:layout\_column*="2"  
 *android:layout\_row*="0"  
 *android:layout\_columnWeight*="1"  
 *android:layout\_rowWeight*="1"  
 *android:layout\_width*="0dp"/>  
  
 *<!-- Operator Buttons -->* <Button  
 *android:id*="@+id/btnAdd"  
 *android:text*="+"  
 *android:layout\_column*="3"  
 *android:layout\_row*="0"  
 *android:layout\_columnWeight*="1"  
 *android:layout\_rowWeight*="1"  
 *android:layout\_width*="0dp"/>  
 <Button  
 *android:id*="@+id/btn4"  
 *android:text*="4"  
 *android:layout\_column*="0"  
 *android:layout\_row*="1"  
 *android:layout\_columnWeight*="1"  
 *android:layout\_rowWeight*="1"  
 *android:layout\_width*="0dp"/>  
 <Button  
 *android:id*="@+id/btn5"  
 *android:text*="5"  
 *android:layout\_column*="1"  
 *android:layout\_row*="1"  
 *android:layout\_columnWeight*="1"  
 *android:layout\_rowWeight*="1"  
 *android:layout\_width*="0dp"/>  
 <Button  
 *android:id*="@+id/btn6"  
 *android:text*="6"  
 *android:layout\_column*="2"  
 *android:layout\_row*="1"  
 *android:layout\_columnWeight*="1"  
 *android:layout\_rowWeight*="1"  
 *android:layout\_width*="0dp"/>  
 <Button  
 *android:id*="@+id/btnSubtract"  
 *android:text*="-"  
 *android:layout\_column*="3"  
 *android:layout\_row*="1"  
 *android:layout\_columnWeight*="1"  
 *android:layout\_rowWeight*="1"  
 *android:layout\_width*="0dp"/>  
 <Button  
 *android:id*="@+id/btn1"  
 *android:text*="1"  
 *android:layout\_column*="0"  
 *android:layout\_row*="2"  
 *android:layout\_columnWeight*="1"  
 *android:layout\_rowWeight*="1"  
 *android:layout\_width*="0dp"/>  
 <Button  
 *android:id*="@+id/btn2"  
 *android:text*="2"  
 *android:layout\_column*="1"  
 *android:layout\_row*="2"  
 *android:layout\_columnWeight*="1"  
 *android:layout\_rowWeight*="1"  
 *android:layout\_width*="0dp"/>  
  
 <Button  
 *android:id*="@+id/btn3"  
 *android:layout\_width*="0dp"  
 *android:layout\_height*="wrap\_content"  
 *android:layout\_row*="2"  
 *android:layout\_rowWeight*="1"  
 *android:layout\_column*="2"  
 *android:layout\_columnWeight*="1"  
 *android:text*="3" />  
  
 <Button  
 *android:id*="@+id/btnMultiply"  
 *android:text*="\*"  
 *android:layout\_column*="3"  
 *android:layout\_row*="2"  
 *android:layout\_columnWeight*="1"  
 *android:layout\_rowWeight*="1"  
 *android:layout\_width*="0dp"/>  
 <Button  
 *android:id*="@+id/btn0"  
 *android:text*="0"  
 *android:layout\_column*="0"  
 *android:layout\_row*="3"  
 *android:layout\_columnWeight*="1"  
 *android:layout\_rowWeight*="1"  
 *android:layout\_width*="0dp"/>  
 <Button  
 *android:id*="@+id/btnDecimal"  
 *android:text*="."  
 *android:layout\_column*="1"  
 *android:layout\_row*="3"  
 *android:layout\_columnWeight*="1"  
 *android:layout\_rowWeight*="1"  
 *android:layout\_width*="0dp"/>  
 <Button  
 *android:id*="@+id/btnEquals"  
 *android:text*="="  
 *android:layout\_column*="2"  
 *android:layout\_row*="3"  
 *android:layout\_columnWeight*="1"  
 *android:layout\_rowWeight*="1"  
 *android:layout\_width*="0dp"/>  
 <Button  
 *android:id*="@+id/btnDivide"  
 *android:text*="÷"  
 *android:layout\_column*="3"  
 *android:layout\_row*="3"  
 *android:layout\_columnWeight*="1"  
 *android:layout\_rowWeight*="1"  
 *android:layout\_width*="0dp"/>  
  
 *<!-- Clear Button -->* <Button  
 *android:id*="@+id/btnClear"  
 *android:text*="C"  
 *android:layout\_column*="0"  
 *android:layout\_row*="4"  
 *android:layout\_columnWeight*="1"  
 *android:layout\_rowWeight*="1"  
 *android:layout\_width*="0dp"/>  
 </GridLayout>  
</RelativeLayout>

JAVA MAIN ACTIVITY FILE

*package* com.mcs.mt.a16;  
  
*import* androidx.appcompat.app.AppCompatActivity;  
  
*import* android.os.Bundle;  
*import* android.os.Bundle;  
*import* android.view.View;  
*import* android.widget.Button;  
*import* android.widget.TextView;  
  
*import* androidx.appcompat.app.AppCompatActivity;  
  
*import* java.util.Stack;  
  
*public class* MainActivity *extends* AppCompatActivity {  
  
 *private* TextView display;  
 *private* StringBuilder input;  
  
 @Override  
 *protected void* onCreate(Bundle savedInstanceState) {  
 *super*.onCreate(savedInstanceState);  
 setContentView(R.layout.*activity\_main*);  
  
 display = findViewById(R.id.*display*);  
 input = *new* StringBuilder();  
  
 *// Set OnClickListener for number buttons  
 int*[] numberButtonIds = {R.id.*btn0*, R.id.*btn1*, R.id.*btn2*, R.id.*btn3*,  
 R.id.*btn4*, R.id.*btn5*, R.id.*btn6*, R.id.*btn7*, R.id.*btn8*, R.id.*btn9*};  
 *for* (*int* id : numberButtonIds) {  
 findViewById(id).setOnClickListener(*new* View.OnClickListener() {  
 @Override  
 *public void* onClick(View v) {  
 Button button = (Button) v;  
 input.append(button.getText());  
 display.setText(input.toString());  
 }  
 });  
 }  
  
 *// Set OnClickListener for operator buttons  
 int*[] operatorButtonIds = {R.id.*btnAdd*, R.id.*btnSubtract*, R.id.*btnMultiply*, R.id.*btnDivide*};  
 *for* (*int* id : operatorButtonIds) {  
 findViewById(id).setOnClickListener(*new* View.OnClickListener() {  
 @Override  
 *public void* onClick(View v) {  
 Button button = (Button) v;  
 input.append(button.getText());  
 display.setText(input.toString());  
 }  
 });  
 }  
  
 *// Set OnClickListener for equals button* findViewById(R.id.*btnEquals*).setOnClickListener(*new* View.OnClickListener() {  
 @Override  
 *public void* onClick(View v) {  
 calculate();  
 }  
 });  
  
 *// Set OnClickListener for clear button* findViewById(R.id.*btnClear*).setOnClickListener(*new* View.OnClickListener() {  
 @Override  
 *public void* onClick(View v) {  
 input.setLength(0);  
 display.setText("");  
 }  
 });  
 }  
  
 *private void* calculate() {  
 String expression = input.toString();  
 *if* (!expression.isEmpty()) {  
 *try* {  
 *double* result = evaluate(expression);  
 display.setText(String.*valueOf*(result));  
 input.setLength(0);  
 input.append(result);  
 } *catch* (ArithmeticException | IllegalArgumentException e) {  
 e.printStackTrace();  
 display.setText("Error");  
 input.setLength(0);  
 }  
 }  
 }  
  
 *public double* evaluate(String expression) {  
 Stack<Double> operands = *new* Stack<>();  
 Stack<Character> operators = *new* Stack<>();  
  
 *for* (*int* i = 0; i < expression.length(); i++) {  
 *char* ch = expression.charAt(i);  
  
 *if* (ch == ' ')  
 *continue*;  
  
 *if* (ch == '(') {  
 operators.push(ch);  
 } *else if* (Character.*isDigit*(ch) || ch == '.') {  
 StringBuilder num = *new* StringBuilder();  
 *while* (i < expression.length() && (Character.*isDigit*(expression.charAt(i)) || expression.charAt(i) == '.')) {  
 num.append(expression.charAt(i));  
 i++;  
 }  
 i--;  
 operands.push(Double.*parseDouble*(num.toString()));  
 } *else if* (ch == ')') {  
 *while* (operators.peek() != '(') {  
 *double* result = *applyOperator*(operators.pop(), operands.pop(), operands.pop());  
 operands.push(result);  
 }  
 operators.pop(); *// Pop '('* } *else* {  
 *while* (!operators.isEmpty() && *precedence*(ch) <= *precedence*(operators.peek())) {  
 *double* result = *applyOperator*(operators.pop(), operands.pop(), operands.pop());  
 operands.push(result);  
 }  
 operators.push(ch);  
 }  
 }  
  
 *while* (!operators.isEmpty()) {  
 *double* result = *applyOperator*(operators.pop(), operands.pop(), operands.pop());  
 operands.push(result);  
 }  
  
 *return* operands.pop();  
 }  
  
 *private static int* precedence(*char* operator) {  
 *if* (operator == '+' || operator == '-')  
 *return* 1;  
 *else if* (operator == '\*' || operator == '/' || operator == '%')  
 *return* 2;  
 *return* 0;  
 }  
  
 *private static double* applyOperator(*char* operator, *double* b, *double* a) {  
 *switch* (operator) {  
 *case* '+':  
 *return* a + b;  
 *case* '-':  
 *return* a - b;  
 *case* '\*':  
 *return* a \* b;  
 *case* '/':  
 *if* (b == 0)  
 *throw new* ArithmeticException("Division by zero");  
 *return* a / b;  
 *case* '%':  
 *if* (b == 0)  
 *throw new* ArithmeticException("Modulo by zero");  
 *return* a % b;  
 }  
 *throw new* IllegalArgumentException("Invalid operator: " + operator);  
 }  
}

Slip 3

Q.1) Create an application that allows the user to enter a number in the textbox. Check whether the number in the textbox is Armstrong or not. Print the message accordingly in the label control.

XML MAIN ACTIVITY FILE

<?*xml version*="1.0" *encoding*="utf-8"?>  
<RelativeLayout *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"  
 *tools:context*=".MainActivity">  
  
 <EditText  
 *android:id*="@+id/numberInputEditText"  
 *android:layout\_width*="match\_parent"  
 *android:layout\_height*="wrap\_content"  
 *android:hint*="Enter a number"  
 *android:inputType*="number" />  
  
 <Button  
 *android:id*="@+id/checkButton"  
 *android:layout\_width*="wrap\_content"  
 *android:layout\_height*="wrap\_content"  
 *android:layout\_below*="@id/numberInputEditText"  
 *android:layout\_centerHorizontal*="true"  
 *android:layout\_marginTop*="16dp"  
 *android:text*="Check"  
 *android:onClick*="checkArmstrongNumber" />  
  
 <TextView  
 *android:id*="@+id/resultTextView"  
 *android:layout\_width*="wrap\_content"  
 *android:layout\_height*="wrap\_content"  
 *android:layout\_below*="@id/checkButton"  
 *android:layout\_centerHorizontal*="true"  
 *android:layout\_marginTop*="16dp"  
 *android:text*=""  
 *android:textSize*="18sp" />  
  
</RelativeLayout>

JAVA MAIN ACTIVITY FILE

*package* com.example.slip3a;  
  
*import* android.os.Bundle;  
*import* android.view.View;  
*import* android.widget.EditText;  
*import* android.widget.TextView;  
  
*import* androidx.appcompat.app.AppCompatActivity;  
  
*public class* MainActivity *extends* AppCompatActivity {  
  
 @Override  
 *protected void* onCreate(Bundle savedInstanceState) {  
 *super*.onCreate(savedInstanceState);  
 setContentView(R.layout.*activity\_main*);  
 }  
  
 *// Function to check whether a number is an Armstrong number  
 private boolean* isArmstrongNumber(*int* number) {  
 *int* originalNumber = number;  
 *int* sum = 0;  
 *int* numberOfDigits = String.*valueOf*(number).length();  
  
 *while* (number > 0) {  
 *int* digit = number % 10;  
 sum += Math.*pow*(digit, numberOfDigits);  
 number /= 10;  
 }  
  
 *return* sum == originalNumber;  
 }  
  
 *// Function to display the result message  
 private void* displayResult(*boolean* isArmstrong) {  
 TextView resultTextView = findViewById(R.id.*resultTextView*);  
 *if* (isArmstrong) {  
 resultTextView.setText("The number is an Armstrong number.");  
 } *else* {  
 resultTextView.setText("The number is not an Armstrong number.");  
 }  
 }  
  
 *// Function called when the Check button is clicked  
 public void* checkArmstrongNumber(View view) {  
 EditText numberInputEditText = findViewById(R.id.*numberInputEditText*);  
 String numberString = numberInputEditText.getText().toString();  
  
 *if* (numberString.isEmpty()) {  
 displayResult(*false*); *// Empty input is not an Armstrong number  
 return*;  
 }  
  
 *int* number = Integer.*parseInt*(numberString);  
 *boolean* isArmstrong = isArmstrongNumber(number);  
 displayResult(isArmstrong);  
 }  
}

Q.2) Create an Android application which examine a phone number entered by a user with the given format. • Area code should be one of the following: 040, 041, 050, 0400, 044 • There should 6 - 8 numbers in telephone number (+ area code)

XML MAIN ACTIVITY FILE

<?*xml version*="1.0" *encoding*="utf-8"?>  
<RelativeLayout *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"  
 *tools:context*=".MainActivity">  
  
 <EditText  
 *android:id*="@+id/phoneNumberEditText"  
 *android:layout\_width*="match\_parent"  
 *android:layout\_height*="wrap\_content"  
 *android:hint*="Enter phone number"  
 *android:inputType*="phone" />  
  
 <Button  
 *android:id*="@+id/checkButton"  
 *android:layout\_width*="wrap\_content"  
 *android:layout\_height*="wrap\_content"  
 *android:layout\_below*="@id/phoneNumberEditText"  
 *android:layout\_centerHorizontal*="true"  
 *android:layout\_marginTop*="16dp"  
 *android:text*="Check"  
 *android:onClick*="checkPhoneNumber" />  
  
 <TextView  
 *android:id*="@+id/resultTextView"  
 *android:layout\_width*="wrap\_content"  
 *android:layout\_height*="wrap\_content"  
 *android:layout\_below*="@id/checkButton"  
 *android:layout\_centerHorizontal*="true"  
 *android:layout\_marginTop*="16dp"  
 *android:text*=""  
 *android:textSize*="18sp" />  
  
</RelativeLayout>

JAVA MAIN ACTIVITY FILE

*package* com.example.slip3b;  
  
*import* android.os.Bundle;  
*import* android.view.View;  
*import* android.widget.EditText;  
*import* android.widget.TextView;  
  
*import* androidx.appcompat.app.AppCompatActivity;  
  
*public class* MainActivity *extends* AppCompatActivity {  
  
 @Override  
 *protected void* onCreate(Bundle savedInstanceState) {  
 *super*.onCreate(savedInstanceState);  
 setContentView(R.layout.*activity\_main*);  
 }  
  
 *// Function to check if the entered phone number is valid  
 private boolean* isValidPhoneNumber(String phoneNumber) {  
 *// Check if the phone number starts with one of the area codes  
 if* (!phoneNumber.startsWith("040") &&  
 !phoneNumber.startsWith("041") &&  
 !phoneNumber.startsWith("050") &&  
 !phoneNumber.startsWith("0400") &&  
 !phoneNumber.startsWith("044")) {  
 *return false*;  
 }  
  
 *// Remove the area code from the phone number* String phoneNumberWithoutAreaCode = phoneNumber.substring(3);  
  
 *// Check if the remaining part of the phone number contains 6 to 8 digits  
 return* phoneNumberWithoutAreaCode.length() >= 6 && phoneNumberWithoutAreaCode.length() <= 8;  
 }  
  
 *// Function to display the result message  
 private void* displayResult(*boolean* isValid) {  
 TextView resultTextView = findViewById(R.id.*resultTextView*);  
 *if* (isValid) {  
 resultTextView.setText("The phone number is valid.");  
 } *else* {  
 resultTextView.setText("Invalid phone number. Please enter a valid phone number.");  
 }  
 }  
  
 *// Function called when the Check button is clicked  
 public void* checkPhoneNumber(View view) {  
 EditText phoneNumberEditText = findViewById(R.id.*phoneNumberEditText*);  
 String phoneNumber = phoneNumberEditText.getText().toString();  
  
 *if* (phoneNumber.isEmpty()) {  
 displayResult(*false*); *// Empty input is not a valid phone number  
 return*;  
 }  
  
 *boolean* isValid = isValidPhoneNumber(phoneNumber);  
 displayResult(isValid);  
 }  
}

Slip 5

Q.1) Java Android Program to Demonstrate Alert Dialog Box.

XML MAIN ACTIVITY FILE

<?*xml version*="1.0" *encoding*="utf-8"?>  
<RelativeLayout *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">  
 <Button  
 *android:id*="@+id/button"  
 *android:layout\_width*="wrap\_content"  
 *android:layout\_height*="wrap\_content"  
 *android:layout\_alignParentLeft*="true"  
 *android:layout\_alignParentRight*="true"  
 *android:layout\_centerVertical*="true"  
 *android:text*="SHOW DIALOG" />  
  
  
  
</RelativeLayout>

JAVA MAIN ACTIVITY FILE

*package* com.example.as18;  
  
  
*import* android.os.Build;  
*import* android.os.Bundle;  
  
  
*import* android.app.Activity;  
*import* android.app.AlertDialog;  
*import* android.view.*Menu*;  
*import* android.view.View;  
*import* android.widget.Button;  
  
*public class* MainActivity *extends* Activity {  
  
 @Override  
 *protected void* onCreate(Bundle savedInstanceState) {  
 *super*.onCreate(savedInstanceState);  
 setContentView(R.layout.*activity\_main*);  
 Button but = (Button) findViewById(R.id.*button*);  
 but.setOnClickListener(*new* View.OnClickListener() {  
  
 @Override  
 *public void* onClick(View v) {  
 *// TODO Auto-generated method stub  
 // Create an alert dialog box* AlertDialog.Builder builder = *new* AlertDialog.Builder(MainActivity.*this*);  
  
 *// Set alert title* builder.setTitle("Alert!!!");  
  
 *// Set the value for the positive reaction from the user  
 // You can also set a listener to call when it is pressed* builder.setPositiveButton("ok", *null*);  
  
 *// The message* builder.setMessage("welcome");  
  
 *// Create the alert dialog and display it* AlertDialog theAlertDialog = builder.create();  
 theAlertDialog.show();  
  
 }  
 });  
 }  
  
 @Override  
 *public boolean* onCreateOptionsMenu(*Menu* menu) {  
 *// Inflate the menu; this adds items to the action bar if it is present.* getMenuInflater().inflate(R.menu.*main\_menu*, menu);  
 *return true*;  
 }  
  
}

Q.2) Create an Android application which will ask the user to input his / her name. A message should display the two items concatenated in a label. Change the format of the label using radio buttons and check boxes for selection. The user can make the label text bold, underlined or italic as well as change its color. Also include buttons to display the message in the label, clear the text boxes as well as label. Finally exit.

XML FILE

<?*xml version*="1.0" *encoding*="utf-8"?>  
<RelativeLayout *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"  
 *tools:context*=".MainActivity">  
  
 <EditText  
 *android:id*="@+id/nameEditText"  
 *android:layout\_width*="match\_parent"  
 *android:layout\_height*="wrap\_content"  
 *android:hint*="Enter your name"  
 *android:layout\_margin*="16dp"  
 *android:inputType*="text" />  
  
 <Button  
 *android:id*="@+id/displayButton"  
 *android:layout\_width*="wrap\_content"  
 *android:layout\_height*="wrap\_content"  
 *android:text*="Display Message"  
 *android:layout\_below*="@id/nameEditText"  
 *android:layout\_centerHorizontal*="true"  
 *android:layout\_marginTop*="16dp"  
 *android:onClick*="displayMessage" />  
  
 <CheckBox  
 *android:id*="@+id/boldCheckBox"  
 *android:layout\_width*="wrap\_content"  
 *android:layout\_height*="wrap\_content"  
 *android:text*="Bold"  
 *android:layout\_below*="@id/displayButton"  
 *android:layout\_marginStart*="16dp"  
 *android:layout\_marginTop*="16dp" />  
  
 <CheckBox  
 *android:id*="@+id/italicCheckBox"  
 *android:layout\_width*="wrap\_content"  
 *android:layout\_height*="wrap\_content"  
 *android:text*="Italic"  
 *android:layout\_below*="@id/displayButton"  
 *android:layout\_toEndOf*="@id/boldCheckBox"  
 *android:layout\_marginStart*="16dp"  
 *android:layout\_marginTop*="16dp" />  
  
 <CheckBox  
 *android:id*="@+id/underlineCheckBox"  
 *android:layout\_width*="wrap\_content"  
 *android:layout\_height*="wrap\_content"  
 *android:text*="Underline"  
 *android:layout\_below*="@id/displayButton"  
 *android:layout\_toEndOf*="@id/italicCheckBox"  
 *android:layout\_marginStart*="16dp"  
 *android:layout\_marginTop*="16dp" />  
  
 <RadioGroup  
 *android:id*="@+id/colorRadioGroup"  
 *android:layout\_width*="wrap\_content"  
 *android:layout\_height*="wrap\_content"  
 *android:orientation*="horizontal"  
 *android:layout\_below*="@id/boldCheckBox"  
 *android:layout\_marginTop*="16dp"  
 *android:layout\_centerHorizontal*="true">  
  
 <RadioButton  
 *android:id*="@+id/redRadioButton"  
 *android:layout\_width*="wrap\_content"  
 *android:layout\_height*="wrap\_content"  
 *android:text*="Red" />  
  
 <RadioButton  
 *android:id*="@+id/blueRadioButton"  
 *android:layout\_width*="wrap\_content"  
 *android:layout\_height*="wrap\_content"  
 *android:text*="Blue" />  
  
 <RadioButton  
 *android:id*="@+id/greenRadioButton"  
 *android:layout\_width*="wrap\_content"  
 *android:layout\_height*="wrap\_content"  
 *android:text*="Green" />  
 </RadioGroup>  
  
 <Button  
 *android:id*="@+id/clearButton"  
 *android:layout\_width*="wrap\_content"  
 *android:layout\_height*="wrap\_content"  
 *android:text*="Clear"  
 *android:layout\_below*="@id/colorRadioGroup"  
 *android:layout\_marginTop*="16dp"  
 *android:layout\_marginStart*="16dp"  
 *android:onClick*="clearLabel" />  
  
 <Button  
 *android:id*="@+id/exitButton"  
 *android:layout\_width*="wrap\_content"  
 *android:layout\_height*="wrap\_content"  
 *android:text*="Exit"  
 *android:layout\_below*="@id/colorRadioGroup"  
 *android:layout\_marginTop*="16dp"  
 *android:layout\_alignParentEnd*="true"  
 *android:layout\_marginEnd*="16dp"  
 *android:onClick*="exitApp" />  
  
 <TextView  
 *android:id*="@+id/messageTextView"  
 *android:layout\_width*="wrap\_content"  
 *android:layout\_height*="wrap\_content"  
 *android:text*=""  
 *android:layout\_below*="@id/clearButton"  
 *android:layout\_centerHorizontal*="true"  
 *android:layout\_marginTop*="32dp"  
 *android:textColor*="@android:color/black"  
 *android:textSize*="18sp" />  
  
</RelativeLayout>

JAVA FILE

*package* com.example.slip5b;  
  
*import* android.graphics.Typeface;  
*import* android.os.Bundle;  
*import* android.view.View;  
*import* android.widget.CheckBox;  
*import* android.widget.EditText;  
*import* android.widget.RadioButton;  
*import* android.widget.TextView;  
  
*import* androidx.appcompat.app.AppCompatActivity;  
  
*public class* MainActivity *extends* AppCompatActivity {  
  
 *private* EditText nameEditText;  
 *private* TextView messageTextView;  
 *private* CheckBox boldCheckBox, italicCheckBox, underlineCheckBox;  
 *private* RadioButton redRadioButton, blueRadioButton, greenRadioButton;  
  
 @Override  
 *protected void* onCreate(Bundle savedInstanceState) {  
 *super*.onCreate(savedInstanceState);  
 setContentView(R.layout.*activity\_main*);  
  
 nameEditText = findViewById(R.id.*nameEditText*);  
 messageTextView = findViewById(R.id.*messageTextView*);  
 boldCheckBox = findViewById(R.id.*boldCheckBox*);  
 italicCheckBox = findViewById(R.id.*italicCheckBox*);  
 underlineCheckBox = findViewById(R.id.*underlineCheckBox*);  
 redRadioButton = findViewById(R.id.*redRadioButton*);  
 blueRadioButton = findViewById(R.id.*blueRadioButton*);  
 greenRadioButton = findViewById(R.id.*greenRadioButton*);  
 }  
  
 *// Function to display the message in the label with the selected format  
 public void* displayMessage(View view) {  
 String name = nameEditText.getText().toString();  
  
 *// Apply text formatting  
 int* style = Typeface.***NORMAL***;  
 *if* (boldCheckBox.isChecked()) {  
 style |= Typeface.***BOLD***;  
 }  
 *if* (italicCheckBox.isChecked()) {  
 style |= Typeface.***ITALIC***;  
 }  
 *if* (underlineCheckBox.isChecked()) {  
 messageTextView.setPaintFlags(messageTextView.getPaintFlags() | android.graphics.Paint.***UNDERLINE\_TEXT\_FLAG***);  
 } *else* {  
 messageTextView.setPaintFlags(messageTextView.getPaintFlags() & (~android.graphics.Paint.***UNDERLINE\_TEXT\_FLAG***));  
 }  
  
 *// Apply text color  
 int* color = android.R.color.***black***;  
 *if* (redRadioButton.isChecked()) {  
 color = android.R.color.***holo\_red\_dark***;  
 } *else if* (blueRadioButton.isChecked()) {  
 color = android.R.color.***holo\_blue\_dark***;  
 } *else if* (greenRadioButton.isChecked()) {  
 color = android.R.color.***holo\_green\_dark***;  
 }  
  
 *// Set the formatted text and color to the label* messageTextView.setText(name);  
 messageTextView.setTypeface(*null*, style);  
 messageTextView.setTextColor(getResources().getColor(color));  
 }  
  
 *// Function to clear the text boxes and label  
 public void* clearLabel(View view) {  
 nameEditText.setText("");  
 messageTextView.setText("");  
 boldCheckBox.setChecked(*false*);  
 italicCheckBox.setChecked(*false*);  
 underlineCheckBox.setChecked(*false*);  
 redRadioButton.setChecked(*false*);  
 blueRadioButton.setChecked(*false*);  
 greenRadioButton.setChecked(*false*);  
 messageTextView.setTypeface(*null*, Typeface.***NORMAL***);  
 messageTextView.setTextColor(getResources().getColor(android.R.color.***black***));  
 messageTextView.setPaintFlags(messageTextView.getPaintFlags() & (~android.graphics.Paint.***UNDERLINE\_TEXT\_FLAG***));  
 }  
  
 *// Function to exit the application  
 public void* exitApp(View view) {  
 finish();  
 }  
}

Slip 9

Create an application that allows the user to enter a number in the textbox named „getnum‟. Check whether the number in the textbox „getnum‟ is Palindrome or not. Print the message accordingly in the label when the user clicks on the button „Check‟.

XML FILE

<?*xml version*="1.0" *encoding*="utf-8"?>  
<RelativeLayout *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"  
 *tools:context*=".MainActivity">  
  
 <EditText  
 *android:id*="@+id/getnum"  
 *android:layout\_width*="match\_parent"  
 *android:layout\_height*="wrap\_content"  
 *android:hint*="Enter a number"  
 *android:layout\_margin*="16dp"  
 *android:inputType*="number" />  
  
 <Button  
 *android:id*="@+id/checkButton"  
 *android:layout\_width*="wrap\_content"  
 *android:layout\_height*="wrap\_content"  
 *android:text*="Check"  
 *android:layout\_below*="@id/getnum"  
 *android:layout\_centerHorizontal*="true"  
 *android:layout\_marginTop*="16dp"  
 *android:onClick*="checkPalindrome" />  
  
 <TextView  
 *android:id*="@+id/resultTextView"  
 *android:layout\_width*="wrap\_content"  
 *android:layout\_height*="wrap\_content"  
 *android:text*=""  
 *android:textSize*="18sp"  
 *android:textColor*="@android:color/black"  
 *android:layout\_below*="@id/checkButton"  
 *android:layout\_centerHorizontal*="true"  
 *android:layout\_marginTop*="16dp" />  
  
</RelativeLayout>

JAVA FILE

*package* com.example.slip9a;  
  
*import* android.os.Bundle;  
*import* android.view.View;  
*import* android.widget.EditText;  
*import* android.widget.TextView;  
  
*import* androidx.appcompat.app.AppCompatActivity;  
  
*public class* MainActivity *extends* AppCompatActivity {  
  
 @Override  
 *protected void* onCreate(Bundle savedInstanceState) {  
 *super*.onCreate(savedInstanceState);  
 setContentView(R.layout.*activity\_main*);  
 }  
  
 *// Function to check whether a number is a palindrome  
 private boolean* isPalindrome(*int* number) {  
 *int* reversedNumber = 0;  
 *int* originalNumber = number;  
  
 *while* (number != 0) {  
 *int* digit = number % 10;  
 reversedNumber = reversedNumber \* 10 + digit;  
 number /= 10;  
 }  
  
 *return* originalNumber == reversedNumber;  
 }  
  
 *// Function to display the result message  
 private void* displayResult(*boolean* isPalindrome) {  
 TextView resultTextView = findViewById(R.id.*resultTextView*);  
 *if* (isPalindrome) {  
 resultTextView.setText("The number is a palindrome.");  
 } *else* {  
 resultTextView.setText("The number is not a palindrome.");  
 }  
 }  
  
 *// Function called when the Check button is clicked  
 public void* checkPalindrome(View view) {  
 EditText getnumEditText = findViewById(R.id.*getnum*);  
 String numberString = getnumEditText.getText().toString();  
  
 *if* (numberString.isEmpty()) {  
 displayResult(*false*); *// Empty input is not a palindrome  
 return*;  
 }  
  
 *int* number = Integer.*parseInt*(numberString);  
 *boolean* isPalindrome = isPalindrome(number);  
 displayResult(isPalindrome);  
 }  
}

Q.2] Java android program to create simple calculator.

ALREADY MENTION

Slip 10

Q.1] Create an application that allows the user to enter a number in the textbox named getnum. Check whether the number in the textbox getnum is Armstrong or not. Print the message using Toast control when the user clicks on the button Check.

ALREADY MENTION

Q.2] Write a program to draw GUI by using Spinner, Buttons

Slip 11

Q.1] Create an Android Application to accept two numbers to calculate its Power and Average. Create two buttons: Power and Average. Display the appropriate result on the next activity on Button click.

Q.2] Create an Android Application to perform following string operation according to user selection of radio button.

Slip 12

Q.1] Construct an Android app that toggles a light bulb ON and OFF when the user clicks on toggle button.

XML FILE

<?*xml version*="1.0" *encoding*="utf-8"?>  
<RelativeLayout *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"  
 *tools:context*=".MainActivity">  
  
 <ToggleButton  
 *android:id*="@+id/toggleButton"  
 *android:layout\_width*="wrap\_content"  
 *android:layout\_height*="wrap\_content"  
 *android:textOff*="OFF"  
 *android:textOn*="ON"  
 *android:checked*="false"  
 *android:layout\_centerInParent*="true"  
 *android:onClick*="toggleLight" />  
  
</RelativeLayout>

JAVA FILE

*package* com.example.slip12a;  
  
*import* android.os.Bundle;  
*import* android.view.View;  
*import* android.widget.Toast;  
*import* android.widget.ToggleButton;  
  
*import* androidx.appcompat.app.AppCompatActivity;  
  
*public class* MainActivity *extends* AppCompatActivity {  
  
 *private boolean* isLightOn = *false*;  
  
 @Override  
 *protected void* onCreate(Bundle savedInstanceState) {  
 *super*.onCreate(savedInstanceState);  
 setContentView(R.layout.*activity\_main*);  
  
 ToggleButton toggleButton = findViewById(R.id.*toggleButton*);  
 toggleButton.setChecked(isLightOn);  
 }  
  
 *public void* toggleLight(View view) {  
 ToggleButton toggleButton = (ToggleButton) view;  
 isLightOn = toggleButton.isChecked();  
  
 *if* (isLightOn) {  
 *// Light is turned on  
 // You can perform actions here to control a real light bulb* Toast.*makeText*(*this*, "Light is ON", Toast.***LENGTH\_SHORT***).show();  
 } *else* {  
 *// Light is turned off  
 // You can perform actions here to control a real light bulb* Toast.*makeText*(*this*, "Light is OFF", Toast.***LENGTH\_SHORT***).show();  
 }  
 }  
}

Q.2] Create an Android application which will ask the user to input his / her name. A message should display the two items concatenated in a label. Change the format of the label using radio buttons and check boxes for selection. The user can make the label text bold, underlined or italic as well as change its color. Also include buttons to display the message in the label, clear the text boxes as well as label. Finally exit.

ALREADY MENTION

Slip 13

Java android program to demonstrate Registration form with validation.

XML FILE

<?*xml version*="1.0" *encoding*="utf-8"?>  
<RelativeLayout *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"  
 *tools:context*=".MainActivity">  
  
 <EditText  
 *android:id*="@+id/nameEditText"  
 *android:layout\_width*="match\_parent"  
 *android:layout\_height*="wrap\_content"  
 *android:hint*="Name"  
 *android:inputType*="textPersonName"  
 *android:layout\_margin*="16dp" />  
  
 <EditText  
 *android:id*="@+id/mobileEditText"  
 *android:layout\_width*="match\_parent"  
 *android:layout\_height*="wrap\_content"  
 *android:hint*="Mobile Number"  
 *android:inputType*="phone"  
 *android:layout\_below*="@id/nameEditText"  
 *android:layout\_margin*="16dp" />  
  
 <EditText  
 *android:id*="@+id/ageEditText"  
 *android:layout\_width*="match\_parent"  
 *android:layout\_height*="wrap\_content"  
 *android:hint*="Age"  
 *android:inputType*="number"  
 *android:layout\_below*="@id/mobileEditText"  
 *android:layout\_margin*="16dp" />  
  
 <EditText  
 *android:id*="@+id/addressEditText"  
 *android:layout\_width*="match\_parent"  
 *android:layout\_height*="wrap\_content"  
 *android:hint*="Address"  
 *android:inputType*="textPostalAddress"  
 *android:layout\_below*="@id/ageEditText"  
 *android:layout\_margin*="16dp" />  
  
 <Button  
 *android:id*="@+id/registerButton"  
 *android:layout\_width*="wrap\_content"  
 *android:layout\_height*="wrap\_content"  
 *android:text*="Register"  
 *android:layout\_below*="@id/addressEditText"  
 *android:layout\_centerHorizontal*="true"  
 *android:layout\_marginTop*="32dp"  
 *android:onClick*="registerUser" />  
  
</RelativeLayout>

JAVA FILE

*package* com.example.slip13a;  
  
*import* android.os.Bundle;  
*import* android.text.TextUtils;  
*import* android.view.View;  
*import* android.widget.EditText;  
*import* android.widget.Toast;  
  
*import* androidx.appcompat.app.AppCompatActivity;  
  
*public class* MainActivity *extends* AppCompatActivity {  
  
 *private* EditText nameEditText, mobileEditText, ageEditText, addressEditText;  
  
 @Override  
 *protected void* onCreate(Bundle savedInstanceState) {  
 *super*.onCreate(savedInstanceState);  
 setContentView(R.layout.*activity\_main*);  
  
 nameEditText = findViewById(R.id.*nameEditText*);  
 mobileEditText = findViewById(R.id.*mobileEditText*);  
 ageEditText = findViewById(R.id.*ageEditText*);  
 addressEditText = findViewById(R.id.*addressEditText*);  
 }  
  
 *public void* registerUser(View view) {  
 String name = nameEditText.getText().toString().trim();  
 String mobile = mobileEditText.getText().toString().trim();  
 String age = ageEditText.getText().toString().trim();  
 String address = addressEditText.getText().toString().trim();  
  
 *if* (TextUtils.*isEmpty*(name)) {  
 nameEditText.setError("Please enter your name");  
 *return*;  
 }  
  
 *if* (TextUtils.*isEmpty*(mobile)) {  
 mobileEditText.setError("Please enter your mobile number");  
 *return*;  
 }  
  
 *if* (TextUtils.*isEmpty*(age)) {  
 ageEditText.setError("Please enter your age");  
 *return*;  
 }  
  
 *if* (TextUtils.*isEmpty*(address)) {  
 addressEditText.setError("Please enter your address");  
 *return*;  
 }  
  
 *// Perform further actions (e.g., save data to database) if all fields are valid  
 // For demonstration, we display a toast message* Toast.*makeText*(*this*, "User registered successfully", Toast.***LENGTH\_SHORT***).show();  
 }  
}

Q.2] Write a Java Android Program to Demonstrate List View Activity with all operations Such as: Insert, Delete, Search

Slip 14

Q.1] Construct an Android application to accept a number and calculate and display Factorial of a given number in TextView.

XML FILE

<?*xml version*="1.0" *encoding*="utf-8"?>  
<RelativeLayout *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"  
 *tools:context*=".MainActivity">  
  
 <EditText  
 *android:id*="@+id/numberEditText"  
 *android:layout\_width*="match\_parent"  
 *android:layout\_height*="wrap\_content"  
 *android:hint*="Enter a number"  
 *android:inputType*="number"  
 *android:layout\_margin*="16dp"/>  
  
 <Button  
 *android:id*="@+id/calculateButton"  
 *android:layout\_width*="wrap\_content"  
 *android:layout\_height*="wrap\_content"  
 *android:text*="Calculate Factorial"  
 *android:layout\_below*="@id/numberEditText"  
 *android:layout\_centerHorizontal*="true"  
 *android:layout\_marginTop*="16dp"  
 *android:onClick*="calculateFactorial"/>  
  
 <TextView  
 *android:id*="@+id/resultTextView"  
 *android:layout\_width*="wrap\_content"  
 *android:layout\_height*="wrap\_content"  
 *android:text*=""  
 *android:textSize*="18sp"  
 *android:textColor*="@android:color/black"  
 *android:layout\_below*="@id/calculateButton"  
 *android:layout\_centerHorizontal*="true"  
 *android:layout\_marginTop*="16dp" />  
  
</RelativeLayout>

JAVA FILE

*package* com.example.slip14a;  
  
*import* android.os.Bundle;  
*import* android.view.View;  
*import* android.widget.EditText;  
*import* android.widget.TextView;  
  
*import* androidx.appcompat.app.AppCompatActivity;  
  
*public class* MainActivity *extends* AppCompatActivity {  
  
 *private* EditText numberEditText;  
 *private* TextView resultTextView;  
  
 @Override  
 *protected void* onCreate(Bundle savedInstanceState) {  
 *super*.onCreate(savedInstanceState);  
 setContentView(R.layout.*activity\_main*);  
  
 numberEditText = findViewById(R.id.*numberEditText*);  
 resultTextView = findViewById(R.id.*resultTextView*);  
 }  
  
 *public void* calculateFactorial(View view) {  
 String inputStr = numberEditText.getText().toString().trim();  
  
 *if* (!inputStr.isEmpty()) {  
 *int* number = Integer.*parseInt*(inputStr);  
 *long* factorial = calculateFactorial(number);  
 resultTextView.setText("Factorial of " + number + " is: " + factorial);  
 } *else* {  
 resultTextView.setText("Please enter a number.");  
 }  
 }  
  
 *private long* calculateFactorial(*int* n) {  
 *if* (n == 0 || n == 1) {  
 *return* 1;  
 }  
 *long* result = 1;  
 *for* (*int* i = 2; i <= n; i++) {  
 result \*= i;  
 }  
 *return* result;  
 }  
}

Q.2] Create an Android application, which show Login Form. After clicking LOGIN button display the “Login Successful…” message if username and password is same else display “Invalid Login” message in Toast Control.

XML FILE

<?*xml version*="1.0" *encoding*="utf-8"?>  
<RelativeLayout *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"  
 *tools:context*=".MainActivity">  
  
 <EditText  
 *android:id*="@+id/usernameEditText"  
 *android:layout\_width*="match\_parent"  
 *android:layout\_height*="wrap\_content"  
 *android:hint*="Username"  
 *android:layout\_margin*="16dp"/>  
  
 <EditText  
 *android:id*="@+id/passwordEditText"  
 *android:layout\_width*="match\_parent"  
 *android:layout\_height*="wrap\_content"  
 *android:hint*="Password"  
 *android:inputType*="textPassword"  
 *android:layout\_below*="@id/usernameEditText"  
 *android:layout\_marginTop*="16dp"  
 *android:layout\_marginStart*="16dp"  
 *android:layout\_marginEnd*="16dp"/>  
  
 <Button  
 *android:id*="@+id/loginButton"  
 *android:layout\_width*="wrap\_content"  
 *android:layout\_height*="wrap\_content"  
 *android:text*="Login"  
 *android:layout\_below*="@id/passwordEditText"  
 *android:layout\_centerHorizontal*="true"  
 *android:layout\_marginTop*="16dp"  
 *android:onClick*="login"/>  
  
</RelativeLayout>

JAVA FILE

*package* com.example.slip14b;  
  
*import* android.os.Bundle;  
*import* android.view.View;  
*import* android.widget.EditText;  
*import* android.widget.Toast;  
  
*import* androidx.appcompat.app.AppCompatActivity;  
  
*public class* MainActivity *extends* AppCompatActivity {  
  
 *private* EditText usernameEditText;  
 *private* EditText passwordEditText;  
  
 @Override  
 *protected void* onCreate(Bundle savedInstanceState) {  
 *super*.onCreate(savedInstanceState);  
 setContentView(R.layout.*activity\_main*);  
  
 usernameEditText = findViewById(R.id.*usernameEditText*);  
 passwordEditText = findViewById(R.id.*passwordEditText*);  
 }  
  
 *public void* login(View view) {  
 String username = usernameEditText.getText().toString().trim();  
 String password = passwordEditText.getText().toString().trim();  
  
 *if* (username.equals(password)) {  
 Toast.*makeText*(*this*, "Login Successful", Toast.***LENGTH\_SHORT***).show();  
 } *else* {  
 Toast.*makeText*(*this*, "Invalid Login", Toast.***LENGTH\_SHORT***).show();  
 }  
 }  
}

Slip 25

Q.1] Create an android application for SMS activity.

XML FILE

<?*xml version*="1.0" *encoding*="utf-8"?>  
<RelativeLayout *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"  
 *tools:context*=".MainActivity">  
  
 <EditText  
 *android:id*="@+id/phoneNumberEditText"  
 *android:layout\_width*="match\_parent"  
 *android:layout\_height*="wrap\_content"  
 *android:hint*="Enter phone number"  
 *android:inputType*="phone"  
 *android:layout\_margin*="16dp"/>  
  
 <EditText  
 *android:id*="@+id/messageEditText"  
 *android:layout\_width*="match\_parent"  
 *android:layout\_height*="wrap\_content"  
 *android:hint*="Enter message"  
 *android:layout\_below*="@id/phoneNumberEditText"  
 *android:layout\_margin*="16dp"/>  
  
 <Button  
 *android:id*="@+id/sendButton"  
 *android:layout\_width*="wrap\_content"  
 *android:layout\_height*="wrap\_content"  
 *android:text*="Send"  
 *android:layout\_below*="@id/messageEditText"  
 *android:layout\_centerHorizontal*="true"  
 *android:layout\_marginTop*="16dp"  
 *android:onClick*="sendSMS"/>  
  
</RelativeLayout>

JAVA FILE

*package* com.example.slip25a;  
  
*import* android.content.Intent;  
*import* android.net.Uri;  
*import* android.os.Bundle;  
*import* android.view.View;  
*import* android.widget.EditText;  
  
*import* androidx.appcompat.app.AppCompatActivity;  
  
*public class* MainActivity *extends* AppCompatActivity {  
  
 *private* EditText phoneNumberEditText;  
 *private* EditText messageEditText;  
  
 @Override  
 *protected void* onCreate(Bundle savedInstanceState) {  
 *super*.onCreate(savedInstanceState);  
 setContentView(R.layout.*activity\_main*);  
  
 phoneNumberEditText = findViewById(R.id.*phoneNumberEditText*);  
 messageEditText = findViewById(R.id.*messageEditText*);  
 }  
  
 *public void* sendSMS(View view) {  
 String phoneNumber = phoneNumberEditText.getText().toString();  
 String message = messageEditText.getText().toString();  
  
 Uri uri = Uri.*parse*("smsto:" + phoneNumber);  
 Intent intent = *new* Intent(Intent.***ACTION\_SENDTO***, uri);  
 intent.putExtra("sms\_body", message);  
 startActivity(intent);  
 }  
}

Q.2] Create an Android application, which show Login Form in table layout. After clicking LOGIN button display the “Login Successful…” message if username and password is same else display “Invalid Login” message in Toast Control.

ALREADY MENTION