* **Calculator -**

// Button Click Logic to Perform Operations

findViewById(R.id.add\_button).setOnClickListener(this::onOperationClick);

findViewById(R.id.sub\_button2).setOnClickListener(this::onOperationClick);

findViewById(R.id.multiply\_button3).setOnClickListener(this::onOperationClick);

findViewById(R.id.divide\_button4).setOnClickListener(this::onOperationClick);

// Method to Handle Operations

private void onOperationClick(View view) {

try {

float num1 = Float.parseFloat(firstNumber.getText().toString());

float num2 = Float.parseFloat(secondNumber.getText().toString());

float result;

// Check which operation button was clicked

if (view.getId() == R.id.add\_button) {

result = num1 + num2;

} else if (view.getId() == R.id.sub\_button2) {

result = num1 - num2;

} else if (view.getId() == R.id.multiply\_button3) {

result = num1 \* num2;

} else if (view.getId() == R.id.divide\_button4) {

if (num2 == 0) {

resultText.setText("Cannot divide by zero");

return;

}

result = num1 / num2;

} else {

result = 0;

}

resultText.setText("Result: " + result);

} catch (NumberFormatException e) {

resultText.setText("Enter valid numbers");

}

}

* **Quiz app –**

private String[] questions = {

"What is the capital of France?",

"Which planet is known as the Red Planet?",

"Who wrote 'Hamlet'?"

};

private String[][] options = {

{"Berlin", "Madrid", "Paris", "Rome"},

{"Earth", "Mars", "Jupiter", "Venus"},

{"Charles Dickens", "William Shakespeare", "J.K. Rowling", "Jane Austen"}

};

private int[] correctAnswers = {2, 1, 1};

private int currentQuestion = 0, score = 0;

@Override

protected void onCreate(Bundle savedInstanceState) {

super.onCreate(savedInstanceState);

setContentView(R.layout.activity\_main);

TextView questionText = findViewById(R.id.questionText);

RadioGroup optionsGroup = findViewById(R.id.optionsGroup);

Button submitButton = findViewById(R.id.submitButton);

TextView scoreText = findViewById(R.id.scoreText);

loadQuestion(questionText, optionsGroup);

submitButton.setOnClickListener(v -> {

int selectedOption = optionsGroup.indexOfChild(findViewById(optionsGroup.getCheckedRadioButtonId()));

if (selectedOption == -1) {

Toast.makeText(this, "Please select an answer!", Toast.LENGTH\_SHORT).show();

return;

}

if (selectedOption == correctAnswers[currentQuestion]) score++;

if (++currentQuestion < questions.length) {

loadQuestion(questionText, optionsGroup);

} else {

questionText.setText("Quiz Over! Your Score: " + score + "/" + questions.length);

optionsGroup.setVisibility(View.GONE);

submitButton.setVisibility(View.GONE);

scoreText.setText("Final Score: " + score + "/" + questions.length);

scoreText.setVisibility(View.VISIBLE);

}

});

}

private void loadQuestion(TextView questionText, RadioGroup optionsGroup) {

questionText.setText(questions[currentQuestion]);

((RadioButton) optionsGroup.getChildAt(0)).setText(options[currentQuestion][0]);

((RadioButton) optionsGroup.getChildAt(1)).setText(options[currentQuestion][1]);

((RadioButton) optionsGroup.getChildAt(2)).setText(options[currentQuestion][2]);

((RadioButton) optionsGroup.getChildAt(3)).setText(options[currentQuestion][3]);

optionsGroup.clearCheck();

}

* **Animation –**

**TextView animatedText = findViewById(R.id.animatedText); // Get reference to TextView**

**TranslateAnimation animation = new TranslateAnimation(0, 500, 0, 0); // Create animation (move from left to right)**

**animation.setDuration(2000); // Set duration for animation (2 seconds)**

**animation.setRepeatCount(TranslateAnimation.INFINITE); // Set animation to repeat indefinitely**

**animation.setRepeatMode(TranslateAnimation.REVERSE); // Set animation to reverse after each cycle**

**animatedText.startAnimation(animation); // Start the animation on the TextView**

* **temp app –**

**private void convertTemperature(String toScale) {**

**if (inputTemp.getText().toString().isEmpty()) {**

**outputText.setText("Please enter a temperature");**

**return;**

**}**

**double temp = Double.parseDouble(inputTemp.getText().toString());**

**double result = 0.0;**

**// Conversion logic based on selected and target scale**

**if (selectedScale.equals("Celsius")) {**

**if (toScale.equals("Celsius")) {**

**result = temp;**

**} else if (toScale.equals("Fahrenheit")) {**

**result = temp \* 9 / 5 + 32;**

**} else if (toScale.equals("Kelvin")) {**

**result = temp + 273.15;**

**}**

**} else if (selectedScale.equals("Fahrenheit")) {**

**if (toScale.equals("Celsius")) {**

**result = (temp - 32) \* 5 / 9;**

**} else if (toScale.equals("Fahrenheit")) {**

**result = temp;**

**} else if (toScale.equals("Kelvin")) {**

**result = (temp - 32) \* 5 / 9 + 273.15;**

**}**

**} else if (selectedScale.equals("Kelvin")) {**

**if (toScale.equals("Celsius")) {**

**result = temp - 273.15;**

**} else if (toScale.equals("Fahrenheit")) {**

**result = (temp - 273.15) \* 9 / 5 + 32;**

**} else if (toScale.equals("Kelvin")) {**

**result = temp;**

**}**

**}**

**outputText.setText(String.format("Result: %.2f", result));**

**}**

* **Todo –**

@Override

protected void onCreate(Bundle savedInstanceState) {

super.onCreate(savedInstanceState);

setContentView(R.layout.activity\_main);

EditText editTextTask = findViewById(R.id.editTextTask);

Button buttonAdd = findViewById(R.id.buttonAdd);

ListView listViewTasks = findViewById(R.id.listViewTasks);

tasks = new ArrayList<>();

adapter = new ArrayAdapter<>(this, android.R.layout.simple\_list\_item\_1, tasks);

listViewTasks.setAdapter(adapter);

buttonAdd.setOnClickListener(v -> {

String task = editTextTask.getText().toString().trim();

if (task.isEmpty()) {

showToast("Please enter a task");

} else {

tasks.add(task);

adapter.notifyDataSetChanged();

editTextTask.setText("");

showToast("Task added!");

}

});

listViewTasks.setOnItemClickListener((parent, view, position, id) -> {

showToast("Removed: " + tasks.remove(position));

adapter.notifyDataSetChanged();

});

}

private void showToast(String message) {

Toast.makeText(this, message, Toast.LENGTH\_SHORT).show();

}

}

* **Various control –**

protected void onCreate(Bundle savedInstanceState) {

super.onCreate(savedInstanceState);

setContentView(R.layout.activity\_main);

number1EditText = findViewById(R.id.number1);

number2EditText = findViewById(R.id.number2);

addButton = findViewById(R.id.addButton);

radioGroup = findViewById(R.id.radioGroup);

checkBoxEnable = findViewById(R.id.checkBoxEnable);

autoCompleteTextView = findViewById(R.id.autoCompleteTextView);

clearButton = findViewById(R.id.clearButton);

toggleButtonEnable = findViewById(R.id.toggleButtonEnable);

resultTextView = findViewById(R.id.resultTextView);

String[] operations = {"Addition", "Subtraction"};

ArrayAdapter<String> adapter = new ArrayAdapter<>(this,

android.R.layout.simple\_dropdown\_item\_1line, operations);

autoCompleteTextView.setAdapter(adapter);

addButton.setOnClickListener(v -> {

if (!toggleButtonEnable.isChecked()) {

Toast.makeText(MainActivity.this, "Please enable the toggle button",

Toast.LENGTH\_SHORT).show();

return;

}

try {

double num1 = Double.parseDouble(number1EditText.getText().toString());

double num2 = Double.parseDouble(number2EditText.getText().toString());

int selectedOperationId = radioGroup.getCheckedRadioButtonId();

RadioButton selectedOperation = findViewById(selectedOperationId);

String operation = selectedOperation != null ?

selectedOperation.getText().toString() :

autoCompleteTextView.getText().toString();

double result = 0;

if (operation.equals("Addition") ||

operation.equals("Addition")) {

result = num1 + num2;

} else if (operation.equals("Subtraction")) {

result = num1 - num2;

} else {

Toast.makeText(MainActivity.this, "Please select a valid operation",

Toast.LENGTH\_SHORT).show();

return;

}resultTextView.setText("Result: " + result);

} catch (NumberFormatException e) {

Toast.makeText(MainActivity.this, "Please enter valid numbers",

Toast.LENGTH\_SHORT).show();

}

});

clearButton.setOnClickListener(v -> {

number1EditText.setText("");

number2EditText.setText("");

resultTextView.setText("Result will be displayed here");

autoCompleteTextView.setText("");

radioGroup.clearCheck();

});

toggleButtonEnable.setOnCheckedChangeListener((buttonView, isChecked) ->

{

String message = isChecked ? "Toggle ON" : "Toggle OFF";

Toast.makeText(MainActivity.this, message,

Toast.LENGTH\_SHORT).show();

});

checkBoxEnable.setOnCheckedChangeListener((buttonView, isChecked) -> {

boolean enable = isChecked && toggleButtonEnable.isChecked();

addButton.setEnabled(enable);

});

}}