



## INTERNAL ASSIGNMENT

**Course Code: OMC209**

**Last Date of Submission: 31/07/24**

**Course Title: Advanced Java Programming Laboratory**

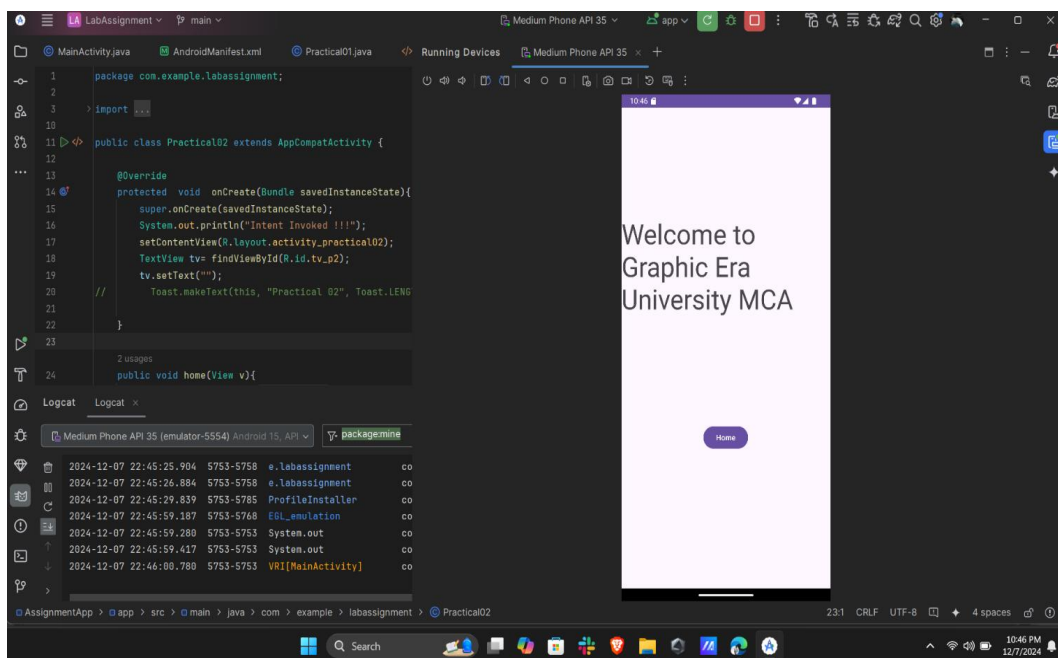
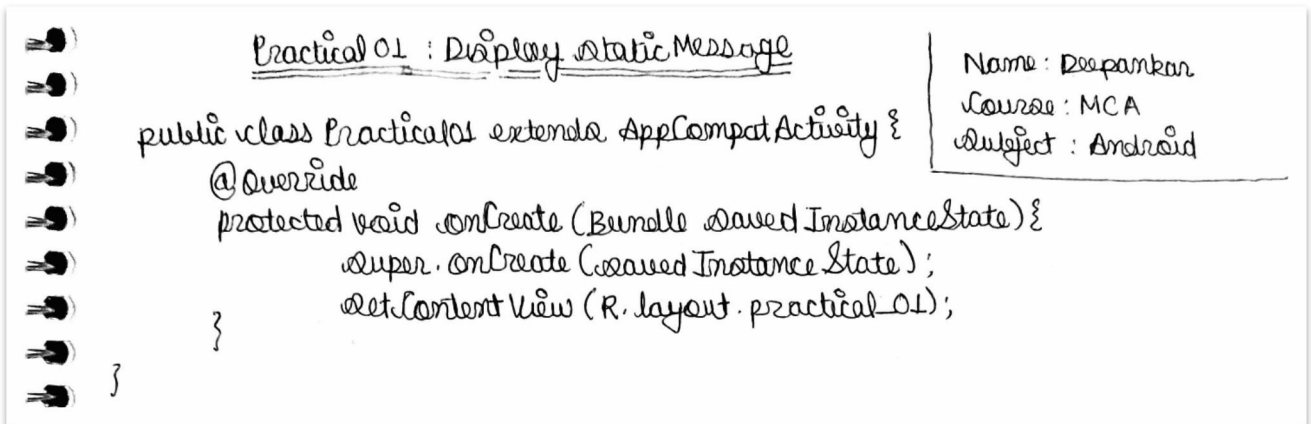
**Maximum Marks: 30**

**Note:**

- The scanned code snippets (handwritten only) of all the 12 lab programs should be included in a word document.
- Screenshots of the output for all possible inputs should also be included in the document at the end of each program.
- Follow the naming convention for the documents:  
**OMC209\_StudID\_Name\_Lab\_Manual.pdf**
- Make sure the scanned code and screenshots of the output are clearly visible.

## 1. Program 1

Create an Android application that displays the message:  
"Welcome to Graphic Era University MCA" on the screen.

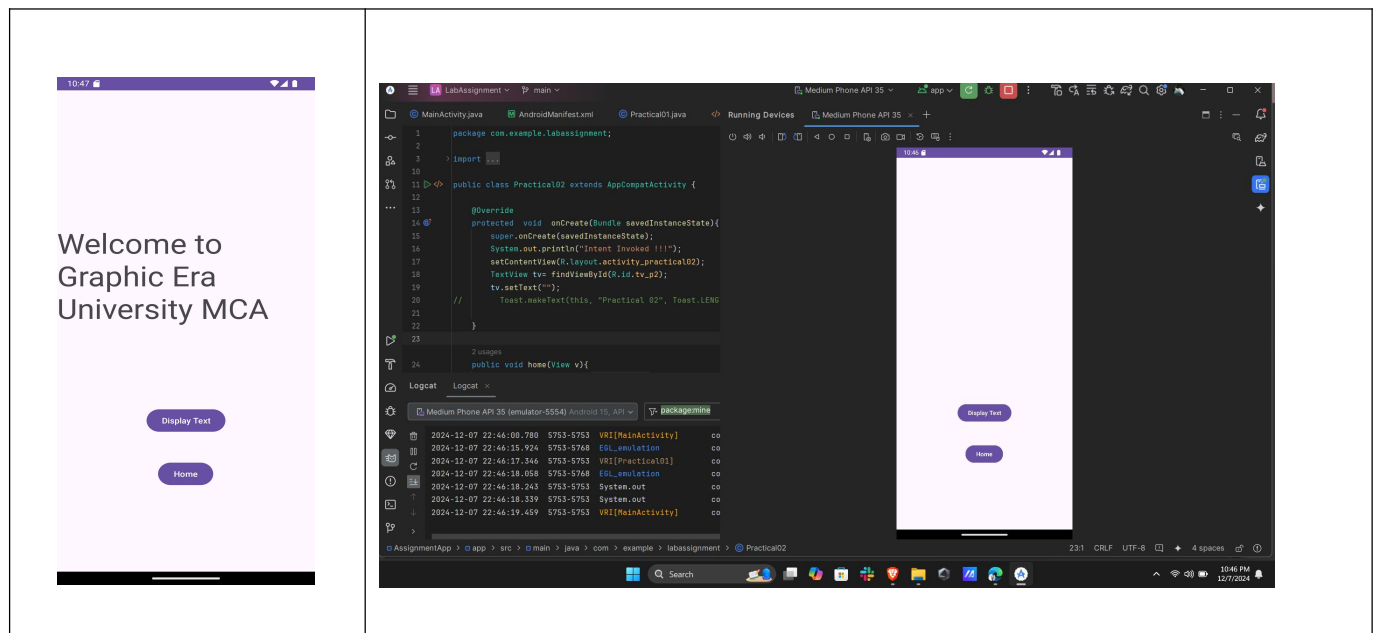
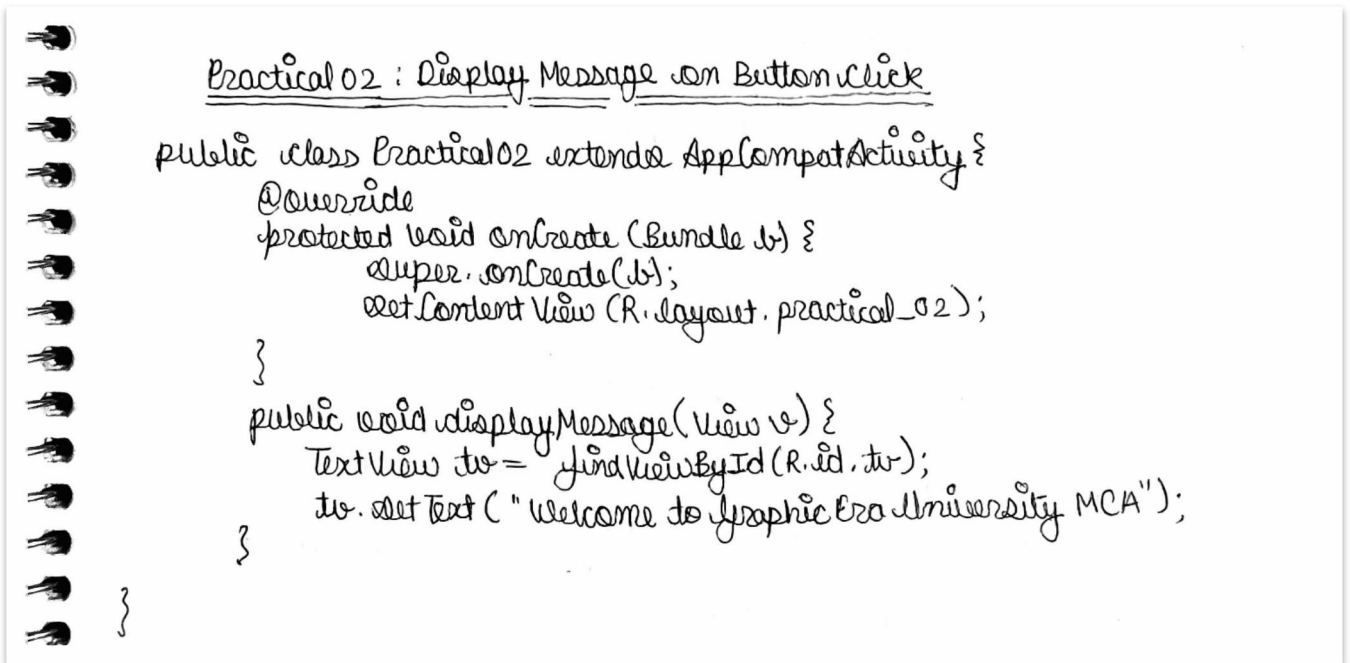


Practical 01

## 2. Program 2

Create an Android application that displays the message:

"Welcome to Graphic Era University - MCA" when a button is clicked.



Practical 02

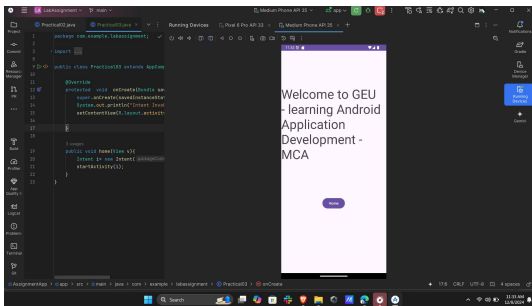
### 3. Program 3

Create an Android application to display the message:  
"Welcome to GEU - learning Android Application Development - MCA"  
and execute the application using different emulators.

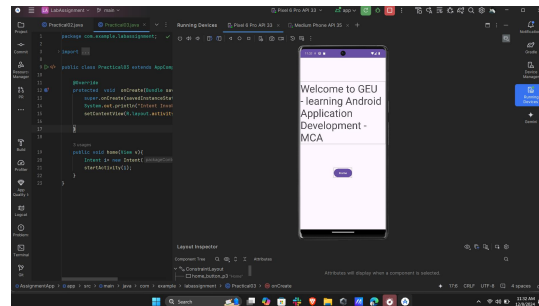
Practical 03 : Message on different Emulators

```

public class Practical03 extends AppCompatActivity {
    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.practical_03);
    }
}
    
```



Medium Phone API



Pixel 6 Pro

## 4. Program 4

Illustrate with a suitable example the use of **Toast** to display a message in an Android application.

*[The message display should wait for a long time]*

```
Practical 04 : Toast Message
public class Practical04 extends AppCompatActivity {
    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_practical04);
    }
    public void toast (View v) {
        Toast.makeText(this, "This is a toast message",
            Toast.LENGTH_LONG).show();
    }
}
```

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## 5. Program 5

Create an Android application for designing a simple calculator with the following basic functionalities:

- Addition
- Subtraction
- Multiplication
- Division

Use controls like **Buttons**, **TextViews**, and **EditTexts**.

```

Practical 05: Simple Calculator

public class Practical05 extends AppCompatActivity {
    @Override
    TextView t; EditText d1, d2; RadioButton r1, r2, r3, r4;

    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_practical05);
        t = findViewById(R.id.t);
        d1 = findViewById(R.id.d1); d2 = findViewById(R.id.d2);
        r1 = findViewById(R.id.r1); r3 = findViewById(R.id.r3);
        r2 = findViewById(R.id.r2); r4 = findViewById(R.id.r4);
        Button b = findViewById(R.id.b);
        b.setOnClickListener(new View.OnClickListener() {
            @Override
            public void onClick(View v) {
                int num1 = Integer.parseInt(d1.getText().toString());
                int num2 = Integer.parseInt(d2.getText().toString());
                String s = "";
                if (r1.isChecked()) s = Integer.toString(num1 + num2);
                else if (r2.isChecked()) s = Integer.toString(num1 - num2);
                else if (r3.isChecked()) s = Integer.toString(num1 * num2);
                else s = Integer.toString(num1 / num2);
                t.setText(s);
            }
        });
    }
}
    
```



## 6. Program 6

Illustrate with a suitable example the use of **Intents** for linking activities.

*[At least two activities should be used]*

### Practical 06 : Using Intents to Link Activities

```
public class Practical06 extends AppCompatActivity {  
    @Override  
    protected void onCreate(Bundle savedInstanceState) {  
        super.onCreate(savedInstanceState);  
        setContentView(R.layout.practical_06);  
    }  
    public void home(View v) {  
        Intent i = new Intent(this, MainActivity.class);  
        startActivity(i);  
    }  
}
```

## 7. Program 7

Illustrate with a suitable example the use of **Intents** for navigating to a website.

[Navigate to Graphic Era University Website]


### Practical 07 : Using Intents to navigate to a website

```
public class Practical07 extends AppCompatActivity {  
    @Override  
    protected void onCreate(Bundle savedInstanceState) {  
        super.onCreate(savedInstanceState);  
        setContentView(R.layout.activity_practical07);  
        WebView webView = findViewById(R.id.webview);  
        webView.getSettings().setJavaScriptEnabled(true);  
        webView.loadUrl("https://geu.ac.in");  
    }  
}
```



## 8. Program 8

Create an Android application that demonstrates the use of **Relative Layout** in Android by using appropriate views to create a login form.



```
Practical 08 : Login Page using Relative Layout  
public class Practical08 extends AppCompatActivity {  
    @Override  
    protected void onCreate(Bundle savedInstanceState) {  
        super.onCreate(savedInstanceState);  
        setContentView(R.layout.activity_practical08);  
    }  
}
```

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**Graphic Era**  
Deemed to be University

XML

< Relative Layout >

< TextView

```
android:id="@+id/tv"
android:layout_width="wrap_content"
android:layout_height="wrap_content"
android:text="login"/>
```

< EditText

```
android:id="@+id/et1"
android:layout_width="wrap_content"
android:layout_height="wrap_content"
android:layout_below="@+id/tv"
android:hint="username"/>
```

< EditText

```
android:id="@+id/et2"
android:layout_width="wrap_content"
android:layout_height="wrap_content"
android:layout_below="@+id/et1"
android:hint="password"/>
```

< Button

```
android:id="@+id/b"
android:layout_width="wrap_content"
android:layout_height="wrap_content"
android:layout_below="@+id/et2"
android:text="Login"/>
```

</Relative Layout>



## 9. Program 9

Create an Android application that demonstrates the use of appropriate layouts and views to create a Registration Form

*[For intercollege sports events]* and display the message:

*"Registration is successful"* on the click of a Submit button.

# INTERNAL ASSIGNMENT



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## Task 09 : Registration Form

```
public class Practical09 extends AppCompatActivity {  
    @Override  
    protected void onCreate(Bundle savedInstanceState) {  
        super.onCreate(savedInstanceState);  
        setContentView(R.layout.activity_practical09);  
        EditText etName = findViewById(R.id.name);  
        EditText etCollege = findViewById(R.id.college);  
        EditText etEmail = findViewById(R.id.email);  
        EditText etContact = findViewById(R.id.contact);  
        Button bt = findViewById(R.id.bt);  
        Spinner s = findViewById(R.id.s);  
        ArrayAdapter<CharSequence> adapter = ArrayAdapter.  
            createFromResource  
            createFromResource(this, R.array.sports_array,  
                android.R.layout.simple_spinner_item);  
        adapter.setDropDownViewResource(android.R.layout.  
            simple_spinner_dropdown_item);  
        s.setAdapter(adapter);  
        bt.setOnClickListener(new View.OnClickListener() {  
            @Override  
            public void onClick(View v) {  
                String name = etName.getText().toString();  
                String college = etCollege.getText().toString();  
                String email = etEmail.getText().toString();  
                String sport = etSpinner.getText().toString();  
                : // logic to save in SQLite  
                Toast.makeText(Practical09.this, "Registration success!",  
                    Toast.LENGTH_LONG).show();  
            }  
        });  
    }  
}
```



## 10. Program 10

Illustrate with a suitable example the use of graphics for displaying the following shapes:

- Circle
- Triangle
- Rectangle

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## Practical 010 : Canvas

```
public class ShapeView extends View {  
    private Paint paint;  
    public ShapeView (Context context, AttributeSet attrs) {  
        super(context, attrs);  
        paint = new Paint();  
        paint.setAntiAlias(true);  
    }  
}
```

@Override

```
protected void onDraw (Canvas c) {  
    super.onDraw(c); Canvas canvas = c;  
  
    paint.setColor(blue);  
    canvas.drawCircle(200, 200, 100, paint);  
  
    paint.setColor(green);  
    canvas.drawRect(50, 350, 350, 550, paint);  
  
    paint.setColor(red);  
    Path p = new Path();  
    p.moveTo(600, 350);  
    p.lineTo(500, 550);  
    p.lineTo(700, 550);  
    p.close();  
    c.drawPath(p, paint);  
}
```

}