

# MOBILE APPLICATION DEVELOPMENT

## MINI PROJECT

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This is a replication of the Gmail application:

### MainActivity.java

```
package com.example.gmail;

import androidx.annotation.NonNull;
import androidx.appcompat.app.AppCompatActivity;
import androidx.recyclerview.widget.DividerItemDecoration;
import androidx.recyclerview.widget.LinearLayoutManager;
import androidx.recyclerview.widget.RecyclerView;
import android.content.Context;
import android.content.Intent;
import android.os.Bundle;
import android.view.LayoutInflater;
import android.view.View;
import android.view.ViewGroup;
import android.widget.ImageButton;
import android.widget.ImageView;
import android.widget.TextView;
import android.widget.Toast;

import com.google.android.material.floatingactionbutton.FloatingActionButton;

public class MainActivity extends AppCompatActivity {

    String name[]= {"Studio","Startup Summit Live","CodeChef","Infosys Hacky","Admissions", "Save the Children", "Coord VIT-AP","LeetCode"};

    int
    image[]={R.drawable.symbol_s,R.drawable.symbol_s,R.drawable.symbol_c,R.drawable.symbol_l_l,
    R.drawable.symbol_s,R.drawable.symbol_s,R.drawable.symbol_c,R.drawable.symbol_l};
    String sub[]= {"Welcome to the studio","Use the code - Early Bird","Kudos to your team for clearing the first round","Stage 1 Div 3",
    "Follow the steps attached", "Save the Children appreciates your efforts !!!","Marks released on VTOP",
    "Initial round scheduled for saturday."};
    String desp[]={"We're happy to see you join the community, I'm John I'll be your point of contact", "Excited to attend the startup conference? Need not worry, we got you covered.",
    "May Challenge is due in 5 days, don't give up now, see you for the challenge."};
```

```

        "Your score in Div 3 has qualified the standard score and we will be
        sending further details shortly",
        "Your request to fetch your academic certificates is under progress.",
        "As a token of our appreciation for all your contributions, we're
        planning to invite you for a session.",
        "Dear students, your marks has been released on V TOP, in case of any
        queries", "Hey there! you've been making steady progress over the past few weeks"};
    String
    time[]={ "1:00AM", "8:00AM", "1:00PM", "Yesterday", "Yesterday", "Yesterday", "May 7th", "May
    3rd"};

```

```

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

    FloatingActionButton fab = findViewById(R.id.compose);

    fab.setOnClickListener(new View.OnClickListener() {
        @Override
        public void onClick(View v) {
            Intent in1 = new Intent(getApplicationContext(), compose_mail.class);
            startActivity(in1);
        }
    });

    rv= findViewById(R.id.RV);
    rv.setAdapter(new MyAdapter(this));
    rv.setLayoutManager(new LinearLayoutManager(this));
    rv.addItemDecoration(new DividerItemDecoration(this,
    DividerItemDecoration.VERTICAL));
}

```

```

private class MyAdapter extends RecyclerView.Adapter <MyHolder>{

    Context mycontext;
    public MyAdapter(MainActivity mainActivity){

        mycontext= mainActivity;
    }
    @NonNull @Override
    public MyHolder onCreateViewHolder(@NonNull ViewGroup parent, int viewType){
        View view =
        LayoutInflater.from(mycontext).inflate(R.layout.mymail, parent, false);
        return new MyHolder(view);
    }
    @Override
    public void onBindViewHolder(@NonNull MyHolder holder, int position)
    {
        holder.t1.setText(name[position]);
        holder.t2.setText(sub[position]);
    }
}

```

```

holder.t3.setText(desp[position]);
holder.t4.setText(time[position]);
holder.img1.setImageResource(image[position]);

holder.img1.setOnClickListener(new View.OnClickListener() {
    @Override
    public void onClick(View v) {
        Intent intent = new Intent(MainActivity.this,mail_page2.class);
        intent.putExtra("subject",sub[position]);
        intent.putExtra("from",name[position]);
        intent.putExtra("description",desp[position]);
        intent.putExtra("image",image[position]);
        intent.putExtra("time",time[position]);
        startActivity(intent);
    }
});
holder.itemView.setOnClickListener(new View.OnClickListener() {
    @Override
    public void onClick(View v) {

Toast.makeText(getApplicationContext(),name[position],Toast.LENGTH_SHORT).show();
    }
});
}
@Override
public int getItemCount() { return image.length;
}
}

private class MyHolder extends RecyclerView.ViewHolder{
    TextView t1,t2,t3,t4;
    ImageView img1;
    ImageButton img2;

    public MyHolder(@NonNull View itemView){
        super(itemView);
        t1= itemView.findViewById(R.id.t1);
        t2=itemView.findViewById(R.id.t2);
        t3= itemView.findViewById(R.id.t3);
        t4=itemView.findViewById(R.id.t4);
        img1= itemView.findViewById(R.id.img1);
        img2= itemView.findViewById(R.id.img2);

    }
}
}

```

**activity\_main.xml:**

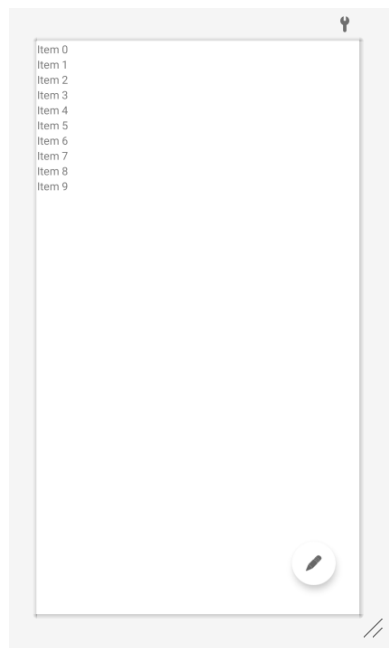
```

<?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">

    <androidx.recyclerview.widget.RecyclerView
        android:id="@+id/RV"
        android:layout_width="0dp"
        android:layout_height="0dp"
        app:layout_constraintBottom_toBottomOf="parent"
        app:layout_constraintEnd_toEndOf="parent"
        app:layout_constraintStart_toStartOf="parent"
        app:layout_constraintTop_toTopOf="parent" />

    <com.google.android.material.floatingactionbutton.FloatingActionButton
        android:id="@+id/compose"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:layout_marginEnd="30dp"
        android:layout_marginBottom="37dp"
        android:clickable="true"
        app:backgroundTint="#FFFFFF"
        app:layout_constraintBottom_toBottomOf="parent"
        app:layout_constraintEnd_toEndOf="parent"
        app:srcCompat="@android:drawable/ic_menu_edit" />
</androidx.constraintlayout.widget.ConstraintLayout>

```



**Mymail.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="wrap_content">

    <com.google.android.material.imageview.ShapeableImageView
        android:id="@+id/img1"
        android:layout_width="68dp"
        android:layout_height="78dp"
        android:layout_marginStart="16dp"
        android:layout_marginTop="28dp"
        android:clickable="true"
        app:layout_constraintStart_toStartOf="parent"
        app:layout_constraintTop_toTopOf="parent"
        tools:srcCompat="@tools:sample/avatars" />

    <TextView
        android:id="@+id/t1"
        android:layout_width="149dp"
        android:layout_height="29dp"
        android:layout_marginStart="96dp"
        android:layout_marginTop="32dp"
        android:text="TextView"
        android:textSize="20dp"
        android:textStyle="bold"
        app:layout_constraintStart_toStartOf="parent"
        app:layout_constraintTop_toTopOf="parent" />

    <TextView
        android:id="@+id/t4"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:layout_marginStart="288dp"
        android:layout_marginTop="28dp"
        android:layout_marginEnd="64dp"
        android:text="TextView"
        app:layout_constraintEnd_toEndOf="parent"
        app:layout_constraintHorizontal_bias="1.0"
        app:layout_constraintStart_toStartOf="parent"
        app:layout_constraintTop_toTopOf="parent" />

    <TextView
        android:id="@+id/t2"
        android:layout_width="217dp"
        android:layout_height="35dp"
        android:layout_marginStart="100dp"
        android:layout_marginTop="68dp"
        android:layout_marginEnd="109dp"
        android:text="TextView"
        app:layout_constraintEnd_toEndOf="parent"
        app:layout_constraintHorizontal_bias="0.266"
        app:layout_constraintStart_toStartOf="parent"

```

```

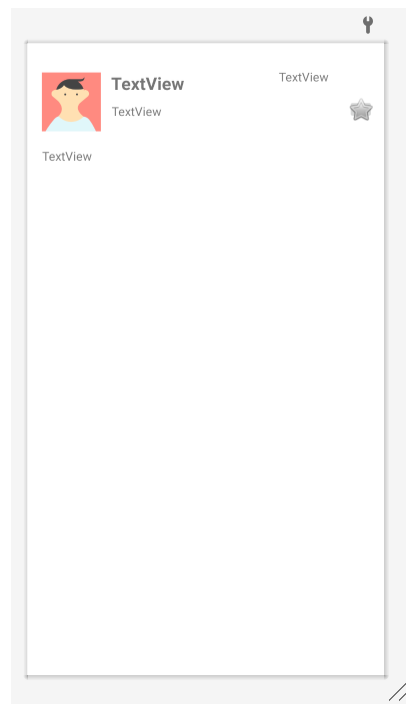
        app:layout_constraintTop_toTopOf="parent" />

<ImageButton
    android:id="@+id/img2"
    android:layout_width="31dp"
    android:layout_height="26dp"
    android:layout_marginStart="350dp"
    android:layout_marginTop="63dp"
    android:layout_marginEnd="68dp"
    app:layout_constraintEnd_toEndOf="parent"
    app:layout_constraintStart_toStartOf="parent"
    app:layout_constraintTop_toTopOf="parent"
    app:srcCompat="@android:drawable/btn_star" />

<TextView
    android:id="@+id/t3"
    android:layout_width="368dp"
    android:layout_height="49dp"
    android:layout_marginStart="16dp"

    android:layout_marginTop="120dp"
    android:layout_marginEnd="27dp"
    android:text="TextView"
    app:layout_constraintEnd_toEndOf="parent"
    app:layout_constraintHorizontal_bias="1.0"
    app:layout_constraintStart_toStartOf="parent"
    app:layout_constraintTop_toTopOf="parent" />
</androidx.constraintlayout.widget.ConstraintLayout>

```



**Mail\_page2.java:**

```

package com.example.gmail;

import androidx.appcompat.app.AppCompatActivity;
import android.content.Intent;
import android.os.Bundle;
import android.view.MenuItem;
import android.view.View;
import android.widget.ImageButton;
import android.widget.ImageView;
import android.widget.PopupMenu;
import android.widget.TextView;
import android.widget.Toast;

public class mail_page2 extends AppCompatActivity implements
PopupMenu.OnMenuItemClickListener {
    TextView sub,from,body,time;
    ImageView iv;
    ImageButton ib;
    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_mail_page2);
        Intent i2 = getIntent();
        sub = findViewById(R.id.subject);
        String subjects = i2.getStringExtra("subject");
        sub.setText(subjects);

        from = findViewById(R.id.from_addr);
        String froms = i2.getStringExtra("from");
        from.setText("From:- " + froms);

        body = findViewById(R.id.body);
        String body1 = i2.getStringExtra("description");
        body.setText(body1);

        iv = findViewById(R.id.img1);
        int image = i2.getIntExtra("image",R.drawable.symbol_L);
        iv.setImageResource(image);

        time = findViewById(R.id.time);
        String times = i2.getStringExtra("time");
        time.setText(times);

        ib = findViewById(R.id.settings);
        ib.setOnClickListener(new View.OnClickListener() {
            @Override
            public void onClick(View v) {
                PopupMenu popup = new PopupMenu(mail_page2.this,v);
                popup.setOnMenuItemClickListener((PopupMenu.OnMenuItemClickListener)mail_page2.this);
                popup.inflate(R.menu.menu_file);
                popup.show();
            }
        });
    }
}

```

```

    }

    @Override
    public boolean onOptionsItemSelected(MenuItem item) {
        return false;
    }
}

```

#### activity\_mail\_page2.xml:

```

<?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=".mail_page2">

    <com.google.android.material.imageview.ShapeableImageView
        android:id="@+id/img1"
        android:layout_width="85dp"
        android:layout_height="82dp"
        android:layout_alignParentStart="true"
        android:layout_alignParentTop="true"
        android:layout_marginStart="18dp"
        android:layout_marginTop="142dp"
        android:clickable="true" />

    <TextView
        android:id="@+id/body"
        android:layout_width="271dp"
        android:layout_height="242dp"
        android:layout_alignParentStart="true"
        android:layout_alignParentBottom="true"
        android:layout_centerInParent="true"
        android:layout_marginStart="18dp"
        android:layout_marginBottom="143dp"
        android:text="TextView"
        android:textSize="16dp" />

    <TextView
        android:id="@+id/from_addr"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:layout_alignParentStart="true"
        android:layout_alignParentTop="true"
        android:layout_marginStart="128dp"
        android:layout_marginTop="145dp"
        android:text="Test"
        android:textSize="18sp"
        android:textStyle="bold" />

    <TextView

```



```
    android:id="@+id/textView6"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:layout_alignParentTop="true"
    android:layout_alignParentEnd="true"
    android:layout_centerHorizontal="true"
    android:layout_marginTop="191dp"
    android:layout_marginEnd="159dp"
    android:text="To:- Jay Venkat"
    android:textSize="18sp"
    android:textStyle="bold" />
```

```
<TextView
    android:id="@+id/subject"
    android:layout_width="272dp"
    android:layout_height="83dp"
    android:layout_alignParentTop="true"
    android:layout_centerHorizontal="true"
    android:layout_marginTop="29dp"
    android:text="TextView"
    android:textColor="#F44336"
    android:textSize="24sp"
    android:textStyle="bold|italic" />
```

```
<TextView
    android:id="@+id/time"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:layout_alignParentTop="true"
    android:layout_alignParentEnd="true"
    android:layout_marginTop="196dp"
    android:layout_marginEnd="26dp"
    android:text="TextView"
    android:textSize="18dp"
    android:textStyle="bold" />
```

```
<com.google.android.material.floatingactionbutton.FloatingActionButton
    android:id="@+id/settings"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:layout_alignParentTop="true"
    android:layout_alignParentEnd="true"
    android:layout_marginTop="253dp"
    android:layout_marginEnd="34dp"
    android:clickable="true"
    app:backgroundTint="#FFFFFF"
    app:srcCompat="@drawable/settings" />
```

```
<com.google.android.material.floatingactionbutton.FloatingActionButton
    android:id="@+id/floatingActionButton2"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:layout_alignParentTop="true"
    android:layout_alignParentEnd="true"
    android:layout_marginTop="251dp"
```

```

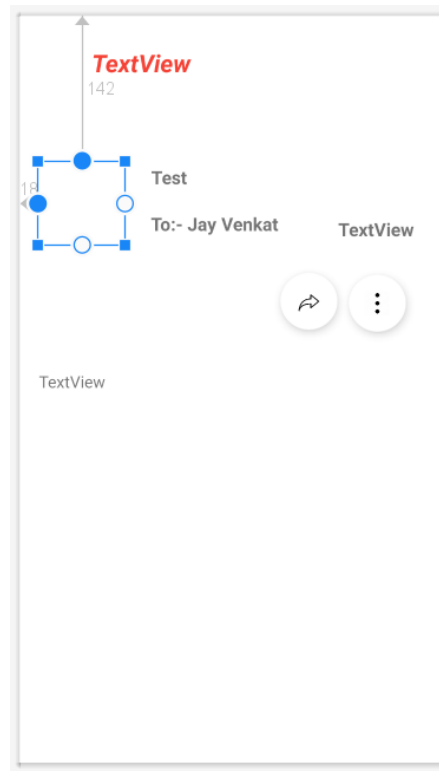
        android:layout_marginEnd="101dp"
        android:clickable="true"
        app:backgroundTint="#FFFFFF"
        app:srcCompat="@drawable/forward4" />

```

```

</RelativeLayout>

```

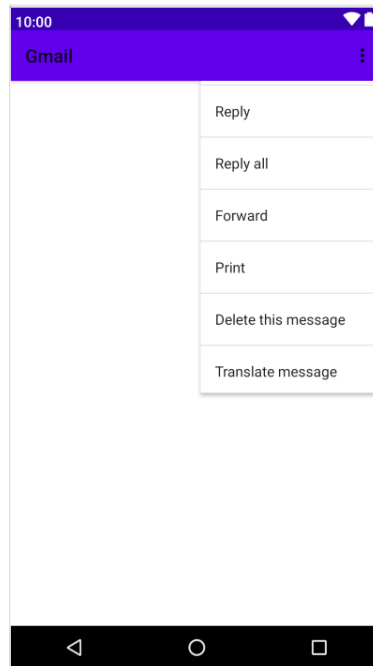


### Menu\_file.xml:

```

<?xml version="1.0" encoding="utf-8"?>
<menu xmlns:android="http://schemas.android.com/apk/res/android">
<item android:id="@+id/search_item"
        android:title="Reply" />
<item android:id="@+id/upload_item"
        android:title="Reply all" />
<item android:id="@+id/copy_item"
        android:title="Forward" />
<item android:id="@+id/print_item"
        android:title="Print" />
<item android:id="@+id/share_item"
        android:title="Delete this message" />
<item android:id="@+id/bookmark_item"
        android:title="Translate message" />
</menu>

```



### Compose\_mail.java:

```
package com.example.gmail;

import androidx.appcompat.app.AppCompatActivity;

import android.content.Intent;
import android.os.Bundle;
import android.view.MenuItem;
import android.view.View;
import android.widget.ImageButton;
import android.widget.PopupMenu;

public class compose_mail extends AppCompatActivity implements
PopupMenu.OnMenuItemClickListener{

    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_compose_mail);
        Intent intent = getIntent();

        ImageButton ib;
        ib = findViewById(R.id.setting_compose);
        ib.setOnClickListener(new View.OnClickListener() {
            @Override
            public void onClick(View v) {
                PopupMenu popup = new PopupMenu(compose_mail.this,v);

                popup.setOnMenuItemClickListener((PopupMenu.OnMenuItemClickListener)compose_mail.this
```

```

    );
        popup.inflate(R.menu.menu_file);
        popup.show();
    }
    });
}

@Override
public boolean onOptionsItemSelected(MenuItem item) {
    return false;
}
}

```

#### activity\_compose\_mail.xml:

```

<?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=".compose_mail">

    <EditText
        android:id="@+id/editTextTextEmailAddress2"
        android:layout_width="248dp"
        android:layout_height="wrap_content"
        android:layout_alignParentStart="true"
        android:layout_alignParentTop="true"
        android:layout_marginStart="143dp"
        android:layout_marginTop="216dp"
        android:ems="10"
        android:inputType="textEmailAddress" />

    <EditText
        android:id="@+id/editTextTextEmailAddress"
        android:layout_width="248dp"
        android:layout_height="wrap_content"
        android:layout_alignParentStart="true"
        android:layout_alignParentTop="true"
        android:layout_marginStart="143dp"
        android:layout_marginTop="155dp"
        android:ems="10"
        android:inputType="textEmailAddress" />

    <TextView
        android:id="@+id/textView2"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:layout_alignParentStart="true"
        android:layout_alignParentTop="true"
        android:layout_marginStart="46dp"
        android:layout_marginTop="224dp"
        android:text="To"

```

```

        android:textSize="20dp"
        android:textStyle="bold" />

<TextView
    android:id="@+id/textView3"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:layout_alignParentStart="true"
    android:layout_alignParentTop="true"
    android:layout_marginStart="35dp"
    android:layout_marginTop="296dp"
    android:text="Subject"
    android:textSize="20dp"
    android:textStyle="bold" />

<EditText
    android:id="@+id/editTextTextPersonName4"
    android:layout_width="241dp"
    android:layout_height="wrap_content"
    android:layout_alignParentTop="true"
    android:layout_alignParentEnd="true"
    android:layout_marginTop="280dp"
    android:layout_marginEnd="23dp"
    android:ems="10"
    android:inputType="textPersonName" />

<TextView
    android:id="@+id/textView"
    android:layout_width="68dp"
    android:layout_height="wrap_content"
    android:layout_alignParentStart="true"
    android:layout_alignParentTop="true"
    android:layout_marginStart="36dp"
    android:layout_marginTop="159dp"
    android:text="From"
    android:textSize="20dp"
    android:textStyle="bold" />

<TextView
    android:id="@+id/textView5"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:layout_alignParentStart="true"
    android:layout_alignParentTop="true"
    android:layout_centerHorizontal="true"
    android:layout_marginStart="106dp"
    android:layout_marginTop="38dp"
    android:text="COMPOSE MAIL"
    android:textColor="#E60606"
    android:textSize="30sp"
    android:textStyle="bold|italic" />

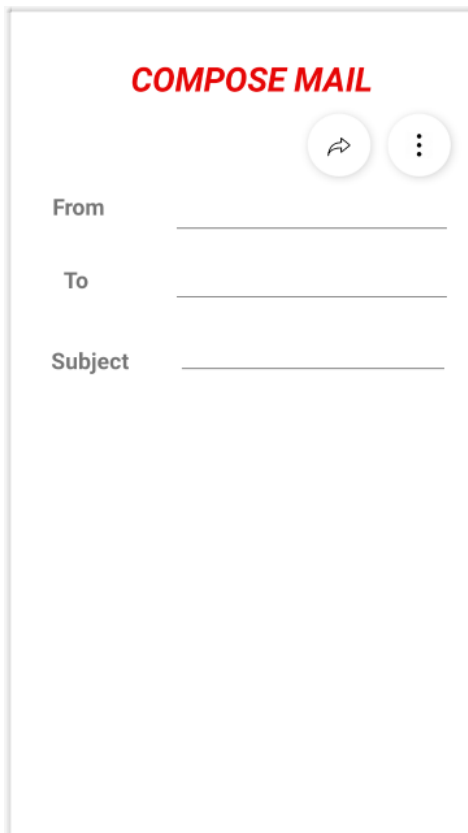
<com.google.android.material.floatingactionbutton.FloatingActionButton
    android:id="@+id/floatingActionButton"
    android:layout_width="wrap_content"

```



```
android:layout_height="wrap_content"
android:layout_alignParentTop="true"
android:layout_alignParentEnd="true"
android:layout_marginTop="90dp"
android:layout_marginEnd="92dp"
android:clickable="true"
app:backgroundTint="#FFFFFF"
app:srcCompat="@drawable/forward4" />
```

```
<com.google.android.material.floatingactionbutton.FloatingActionButton
    android:id="@+id/setting_compose"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:layout_alignParentTop="true"
    android:layout_alignParentEnd="true"
    android:layout_marginTop="90dp"
    android:layout_marginEnd="21dp"
    android:clickable="true"
    app:backgroundTint="#FFFFFF"
    app:srcCompat="@drawable/settings" />
```

</RelativeLayout>

A screenshot of a mobile application's 'COMPOSE MAIL' screen. The title 'COMPOSE MAIL' is at the top in red. Below it are two circular icons: a right-pointing arrow and a vertical ellipsis. The form has three input fields labeled 'From', 'To', and 'Subject' on the left, each with a horizontal line for text entry on the right. The background is white with a light gray border.

**COMPOSE MAIL**

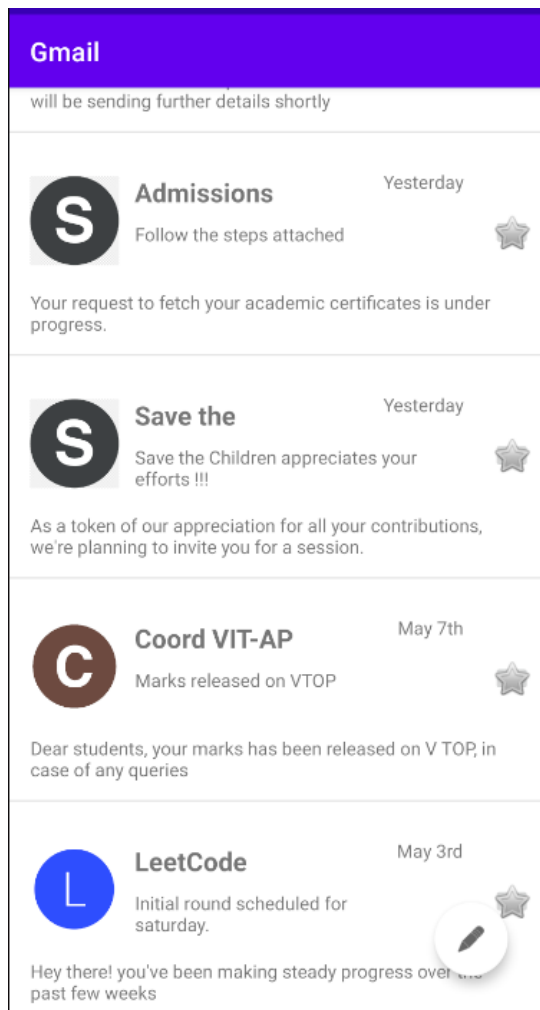
From \_\_\_\_\_

To \_\_\_\_\_

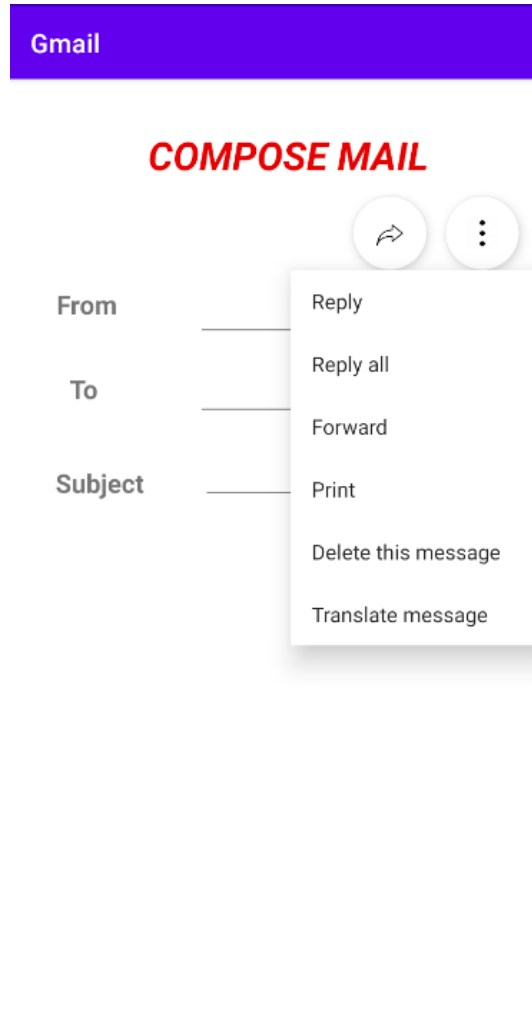
Subject \_\_\_\_\_

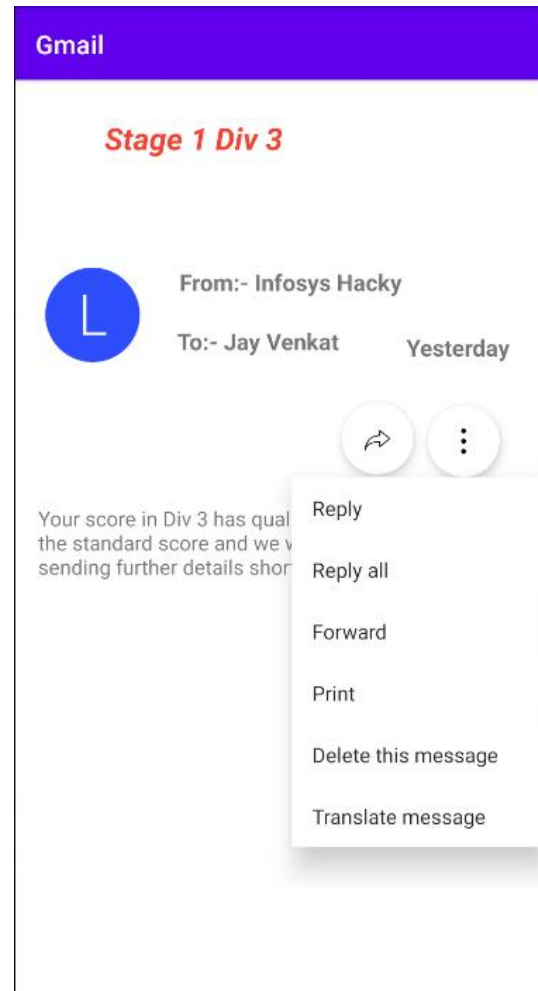
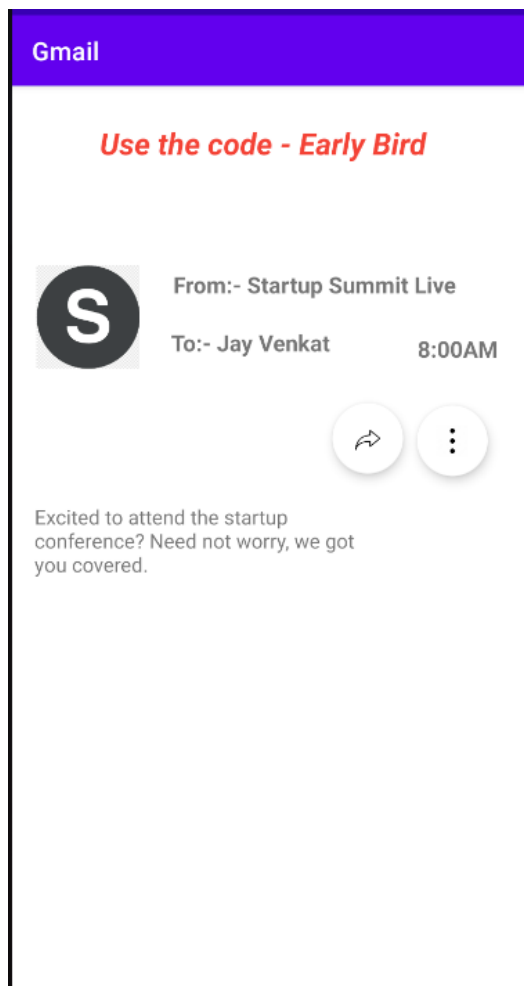
## Output screenshots:

Page -1 (Inbox):



Page – 2 (Compose mail with popup menu)





DONE BY

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CSE(NETWORKING AND SECURITY)