WEB ICP9

#Venubabu Linga

Email : vl6hw@umsystem.edu

GitHub : https://github.com/VenubabuLinga/WebDevCourse/tree/main/Moblie_dev/ICP9

Sarath Chandra kunisetty – skkh2@umsystem.edu

GitHub link: https://github.com/kunisettysarath/WebMobileProgramming-Spring22/tree/main/WebDevelopment/ICP's/ICP9

We are going to create a simple Pizza order application with elements as text view, edit view, buttons, check box, radio buttons in LinearLayouts. We also included the sending mail action with the order summary.

1.Activity_main.xml(welcome page) :

In this activity file we added the text view, button and assigned the id values to them in constraint layout.

Text View : A text-display element that shows text to the user. To provide text that can be edited by the user.

Button : A user interface element that allows the user to perform an action by tapping or clicking.

Input code:

Activity_Main.java(JavaCode)

Here the button click will takes to the order page using button.setOnClickListner() view. With start intent.

```java
package com.example.pizza_order;

import ...

public class MainActivity extends AppCompatActivity {

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

         Button button = findViewById(R.id.order);

        button.setOnClickListener(new View.OnClickListener() {
            public void onClick(View view) {
                Intent intent = new Intent( packageContext: MainActivity.this, Order_page.class);
                startActivity(intent);
            }
        });
    }
```

2.Activity_order_page :

In this activity page we have used the scroll view with elements Edit Text, check Box, radio group with radio buttons which have aligned them in Linear Layout.

Scroll View: A view group that enables scrolling of the view hierarchy contained within it. Only one direct child may be placed within a scroll view. To add multiple views within the scroll view, add a view group, such as Linear Layout.

Liner Layout : A layout in which other views are arranged horizontally in a single column or vertically in a single row.

Edit Text : A text entry and editing user interface element.

checkbox: A checkbox is a type of two-state button that can be checked or unchecked.

Radio Group: This class is used to create a multiple-exclusion scope for a set of radio buttons. Checking one radio button that belongs to a radio group unchecks any previously checked radio button within the same group.

We used the predefined string using **R.string** which are in values folder.

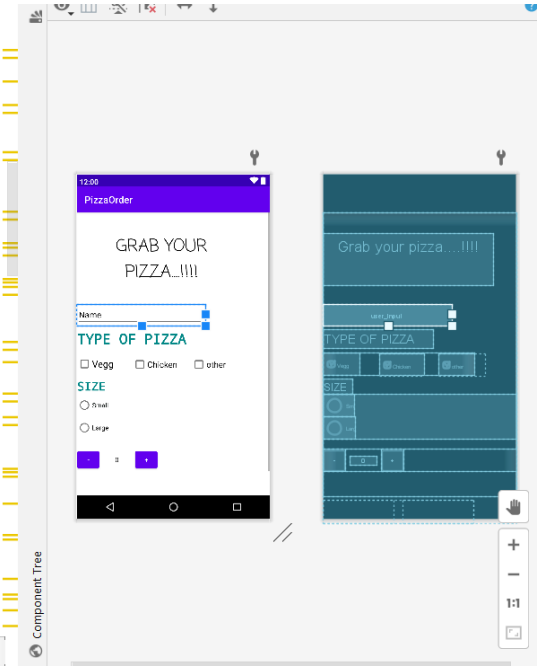
```xml
<string name="order_summary_chicken">Chicken - <xliff:g example="yes" id="addSpices">%s</xliff:g></string>
<string name="order_summary_vegge">veggie - <xliff:g example="yes" id="addSpices">%s</xliff:g></string>
<string name="order_summary_Other">Other - <xliff:g example="yes" id="addSpices">%s</xliff:g></string>
<string name="order_summary_quantity">Quantity: <xliff:g example="2" id="quantity">%d</xliff:g></string>
<string name="order_summary_total_price">Total: $ <xliff:g example="10" id="price">%.2f</xliff:g></string>
```

In this page we take the details from the user regarding the Pizza order and uses button to make order as well as other button to see the summary of order.

Input code :

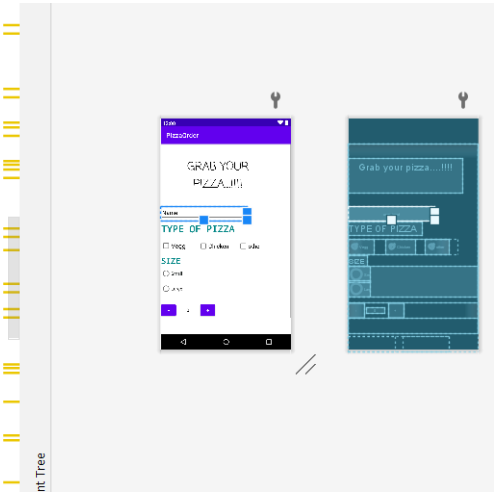
```
<ScrollView xmlns:android="http://schemas.android.com/apk/res/android"
    xmlns:tools="http://schemas.android.com/tools"
    android:layout_width="match_parent"
    android:layout_height="match_parent"
    android:background="@color/white">

    <LinearLayout
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:orientation="vertical"
        tools:context=".Order_page">
        <TextView
            android:id="@+id/namepizza"
            android:layout_width="wrap_content"
            android:layout_height="wrap_content"
            android:layout_marginTop="45dp"
            android:layout_marginRight="50dp"
            android:fontFamily="casual"
            android:text="Grab your pizza....!!!!"
            android:textAlignment="center"
            android:textAllCaps="true"
            android:textColor="@color/black"
            android:textSize="36sp" />

        <EditText
            android:id="@+id/user_input"
            android:layout_width="wrap_content"
            android:layout_height="wrap_content"
            android:layout_marginTop="40dp"
```

```
<LinearLayout
    android:layout_width="321dp"
    android:layout_height="wrap_content"
    android:orientation="horizontal"
    android:layout_marginTop="10dp">

    <CheckBox
        android:id="@+id/veg_checkBox"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:text="Vegg"
        android:textColor="@color/black"
        android:textSize="20dp" />

    <CheckBox
        android:id="@+id/chic_checkBox"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:layout_marginLeft="40dp"
        android:text="Chicken"
        android:textColor="@color/black"
        android:textSize="18dp" />

    <CheckBox
        android:id="@+id/other_checkBox"
        android:layout_width="101dp"
```



Designer - Attributes

```
<RadioGroup xmlns:android="http://schemas.android.com/apk/res/android"
    android:layout_width="match_parent"
    android:layout_height="wrap_content"
    android:orientation="vertical"
    android:id="@+id/radiogrp">
    <RadioButton android:id="@+id/small"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:text="Small"
        android:textColor="#0F1514"
        android:onClick="onClick"/>
    <RadioButton android:id="@+id/Large"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:text="Large"
        android:textColor="@color/black"
        android:onClick="onClick"/>
</RadioGroup>
```



Order_page.Java :

In this Order_page class we written the functionality to the ordering pizza, which will send mail notification and also the button to see the summary of the order.

The code for the same were explained in the below screen shots with the appropriate comments.

Added the required classes and given the various variables.

```
package com.example.pizza_order;

import android.content.Context;
import android.content.Intent;
import android.net.Uri;
import android.os.Bundle;
import android.util.Log;
import android.view.View;
import android.widget.AdapterView;
import android.widget.Button;
import android.widget.CheckBox;
import android.widget.EditText;
import android.widget.RadioButton;
import android.widget.RadioGroup;
import android.widget.TextView;
import android.widget.Toast;

import androidx.appcompat.app.AppCompatActivity;

//import org.apache.commons.*;

public class Order_page extends AppCompatActivity implements AdapterView.OnItemSelectedListener{
    //variables for the price of pizzas
    private static final Integer PIZZA_PRICE = 9;
    private static final Integer CHICKEN_PRICE = 18;
    private static final Integer VEGGIE_PRICE = 13;
    private static final Integer OP_PRICE = 8;
    float totalPrice;
    Integer quantity = 0;
    String orderSummary;
    public String type;
```

Function to bring the details of order in final string, here we have used the R.string where we assigned the text to each sring which are shown below.

```
//funtion to get the order summary in a string format
    private String fetchOrderSummary(String Name, String size,boolean chicken, boolean veggie,
                                     boolean op, float totalPrice) {
        String orderSummaryMessage ="Order By: " + Name + "\n"+ "Size : "+size+"\n"+
                getString(R.string.order_summary_chicken,boolToString(chicken)) + "\n" +
                getString(R.string.order_summary_vegge, boolToString(veggie)) + "\n" +
                getString(R.string.order_summary_Other, boolToString(op)) + "\n" +
                getString(R.string.order_summary_quantity, quantity) + "\n" +
                getString(R.string.order_summary_total_price,totalPrice ) + "\n" +
                getString(R.string.thank_you)+"\n\n"+
                "Note: chicken = $18, veggie = $13, other = $8" ;
        return orderSummaryMessage;
    }
```

Functions to make order and see the summary of order.

```
    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_order_page);
'/asigning values from the order page from respective id's
        quantityTextView = findViewById(R.id.quantity_text_view);
        userNameText = findViewById(R.id.user_input);
        chickenChecked = findViewById(R.id.chic_checkBox);
        veggieChecked = findViewById(R.id.veg_checkBox);
        opChecked = findViewById(R.id.other_checkBox);
        RDG=findViewById(R.id.radiogrp);
'/button fucntionalty to the summary of order

        Button detailsBtn = findViewById(R.id.orderinfo);
        detailsBtn.setOnClickListener(new View.OnClickListener() {
            public void onClick(View view) { orderSummary(view); }
        });
'/button to make the order
        Button placeOrderBtn = findViewById(R.id.placeorder);
        placeOrderBtn.setOnClickListener(new View.OnClickListener() {
            public void onClick(View view) { orderPizzaMain(view); }
        });
```

Function to calculate the price.

```
//fucntion for the price caluculation.
    private float calculatePrice(boolean chicken, boolean veggie,  boolean other, Integer quantity) {
        int basePrice = PIZZA_PRICE;
        if (chicken) {
            basePrice += CHICKEN_PRICE;
        }
        if (veggie) {
            basePrice += VEGGIE_PRICE;
        }

        if(other){
            basePrice +=OP_PRICE;
        }
        return quantity * basePrice;
    }
```

Function to send mail notification and the retrieve the details of order.

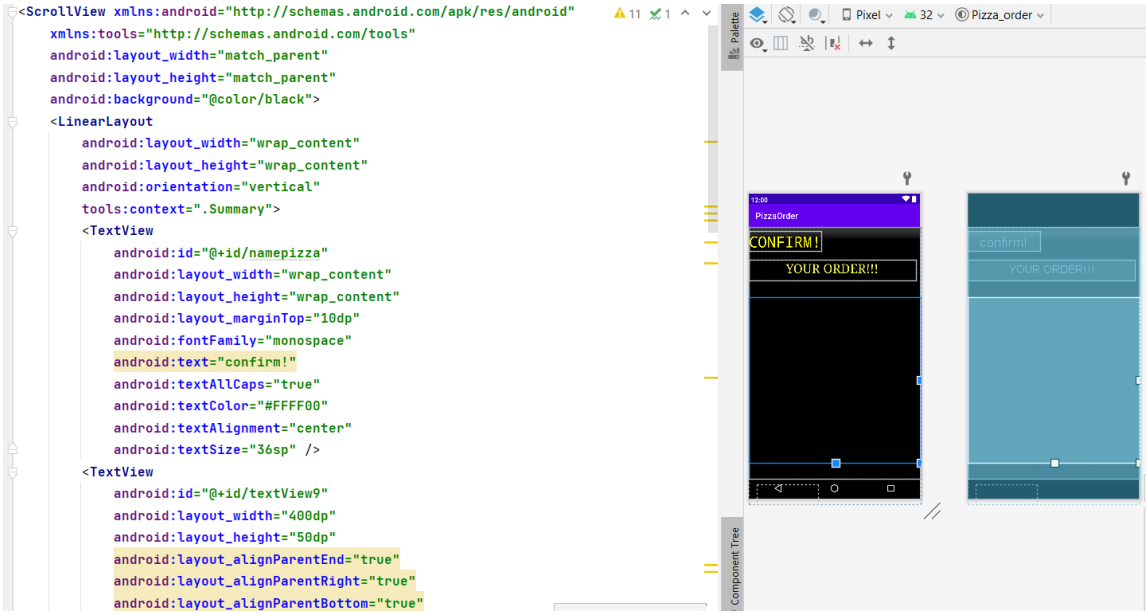
```
//Function to collect the deatils(summary) of order.
    private String fetchDetails() {
        boolean chicken = chickenChecked.isChecked();
        boolean veggie = veggieChecked.isChecked();
       // boolean pepperoni = pepperoniChecked.isChecked();
        boolean other = opChecked.isChecked();
        totalPrice = calculatePrice(chicken, veggie,other, quantity);

        return fetchOrderSummary(userNameText.getText().toString(),RDB.getText().toString(),chicken, veggie, other, totalPrice);
    }
//intent to go to the summary page.
    public void orderSummary(View view) {
        if (!isUserEmpty()) {
            orderSummary = fetchDetails();
            Intent intent = new Intent( packageContext: Order_page.this, Summary.class);
            intent.putExtra( name: "orderSummary", orderSummary);
            startActivity(intent);
        }    }
    //Function that will send mail notification
    public void orderPizzaMain(View view) {
        if (!isUserEmpty()) {
            orderSummary = fetchDetails();
            Intent emailIntent = new Intent(Intent.ACTION_SEND);
            emailIntent.setType("plain/text");
            emailIntent.putExtra(Intent.EXTRA_EMAIL, new String[] {"venulinga63@gmail.com"});
            emailIntent.putExtra(Intent.EXTRA_SUBJECT,  value: "Order Summary");
            emailIntent.putExtra(Intent.EXTRA_TEXT, orderSummary);
            startActivity(Intent.createChooser(emailIntent,  title: ""));
        }
```

Function to increase and decrease the no of pizzas.

```
//Function to increase the no of pizzas.
    public void increment(View view) {
        if (quantity < 20) {
            quantity = quantity + 1;
            display(quantity);
        } else {
            Log.i( tag: "PizzaOrder",  msg: "Please select less than 20 Pizzas");
            Context context = getApplicationContext();
            String lowerLimitToast = "Please select less than 20 Pizzas";
            int duration = Toast.LENGTH_SHORT;
            Toast toast = Toast.makeText(context, lowerLimitToast, duration);
            toast.show();
            return;
        }    }
//function to decrease the no of pizzas.
    public void decrement(View view) {
        if (quantity > 1) {
            quantity = quantity - 1;
            display(quantity);
        } else {
            Log.i( tag: "pizzaOrder",  msg: "Please select atleast one Pizza");
            Context context = getApplicationContext();
            String upperLimitToast = "Please select atleast one Pizza";
            int duration = Toast.LENGTH_SHORT;
            Toast toast = Toast.makeText(context, upperLimitToast, duration);
```

3.Activity_summary.xml:

Here in this page we used the text view to show the summary of details and also the button to take the order page in a scroll view with LinearLayout.



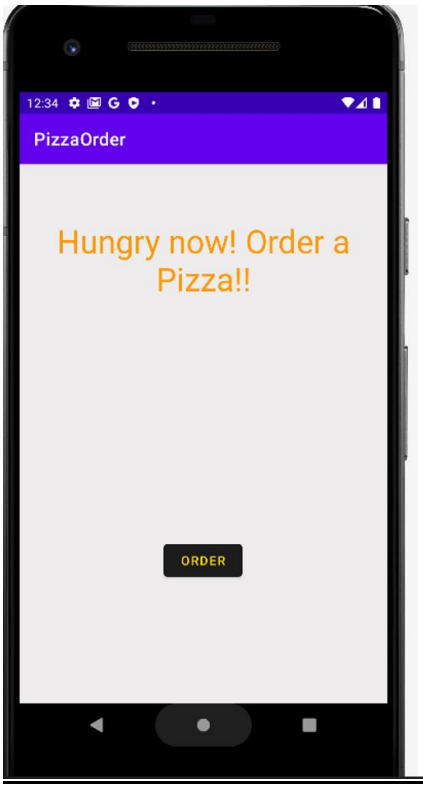
```
<ScrollView xmlns:android="http://schemas.android.com/apk/res/android"
    xmlns:tools="http://schemas.android.com/tools"
    android:layout_width="match_parent"
    android:layout_height="match_parent"
    android:background="@color/black">
    <LinearLayout
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:orientation="vertical"
        tools:context=".Summary">
        <TextView
            android:id="@+id/namepizza"
            android:layout_width="wrap_content"
            android:layout_height="wrap_content"
            android:layout_marginTop="10dp"
            android:fontFamily="monospace"
            android:text="confirm!"
            android:textAllCaps="true"
            android:textColor="#FFFF00"
            android:textAlignment="center"
            android:textSize="36sp" />
        <TextView
            android:id="@+id/textView9"
            android:layout_width="400dp"
            android:layout_height="50dp"
            android:layout_alignParentEnd="true"
            android:layout_alignParentRight="true"
            android:layout_alignParentBottom="true"
```

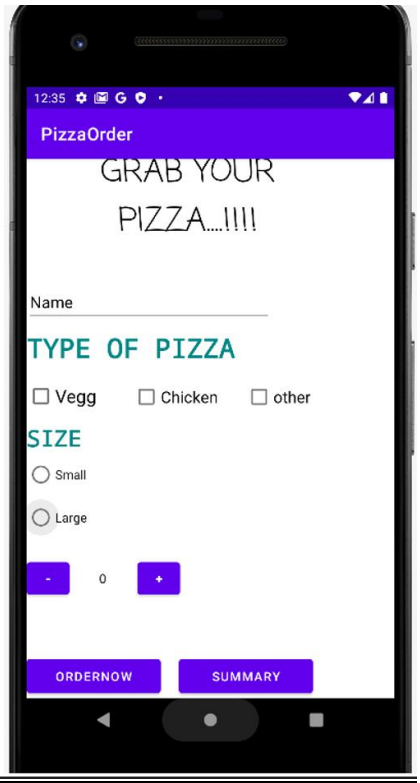
Summary.java;

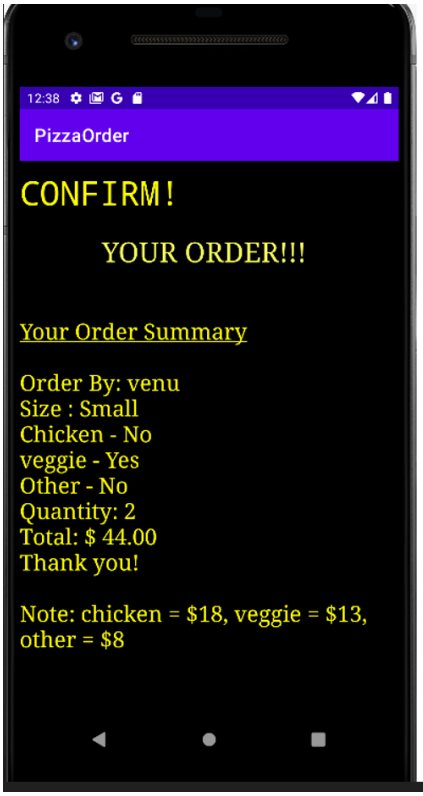
in this class we have used the html format to show the summary string in the text view. We are passing the summary text to the summary id text view .

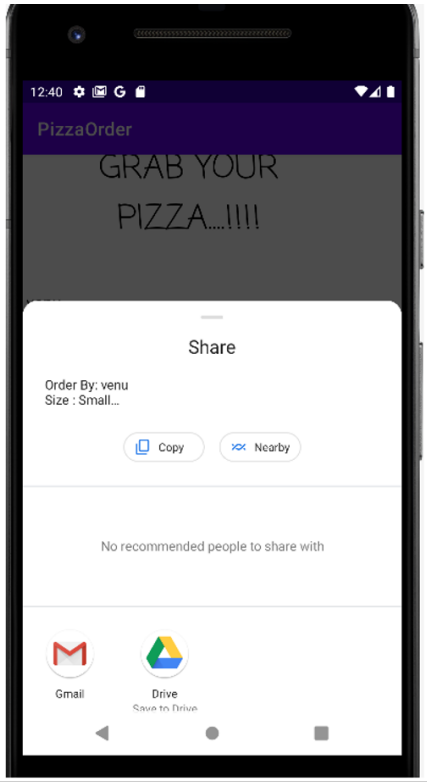
```
public class Summary extends AppCompatActivity {

    TextView summary;

    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_summary);
        summary = findViewById(R.id.summaryText);
        summary.setText(Html.fromHtml( source: "<u>Your Order Summary</u><br/><br/>"));
        if(getIntent() != null){
            summary.append(getIntent().getStringExtra( name: "orderSummary"));
        }else{
            summary.setText("You have no orders !!");
        }
        summary.append(Html.fromHtml( source: "<br/>"));
        summary.setVisibility(View.VISIBLE);
```

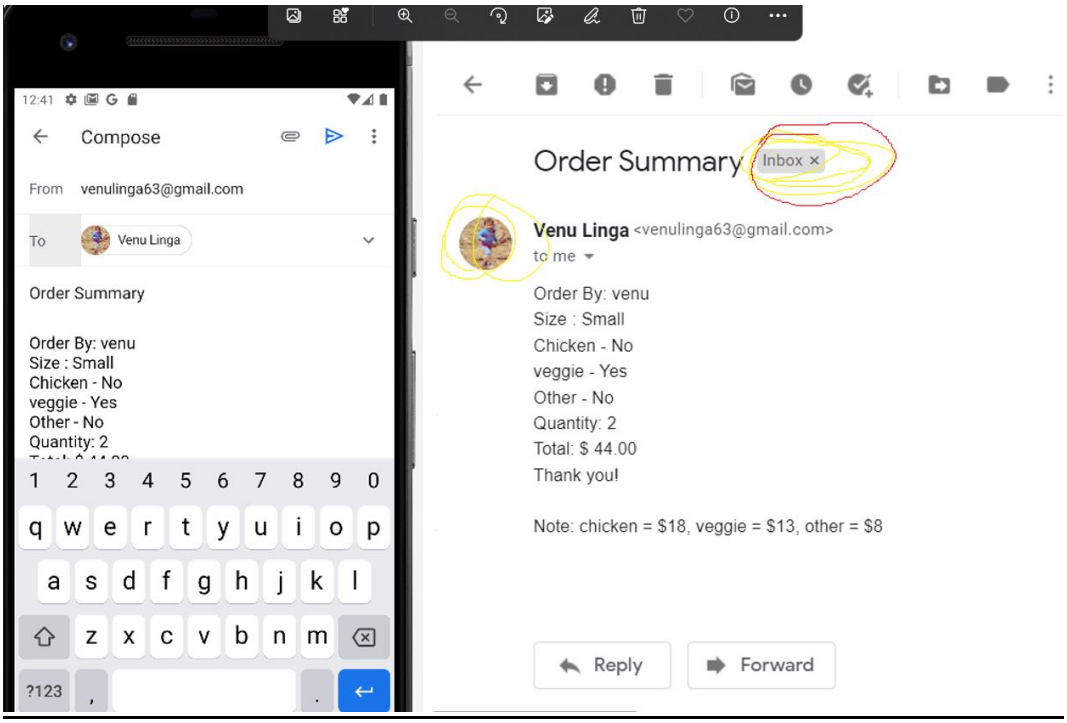
Final OutPut :











Conclusion :

In this ICP we have learned the topics like sending mail in android studio, knowledge on the elements like scroll down view , linear Layout, check box's, radio group elements.