Lab 1 on Mobile Programming

1   Requirement

The objective of the first lab is to practice activity lifecycle, the intend function.

> The requirement of your report:
>
> - Each one should provide an individual report;
>
> - Screenshots of your codes, both `xml` and `java`;
>
> - **Screenshots of your application**, containing **each stage of operation**, and **explanation** on the results;
>
> - *If you want to add new functions to the application, explain your design and results;
>
> - Send me by email: qiong.liu@cyu.fr, and name your report as `MP_TP1_Prenom_Nom.pdf`.

2   Food Delivery

Create the online food ordering system for the restaurant. Basic functions include selecting food, fill the delivery details, and button "Order" gives the total price, button "Back to Main" to intent to next activities.
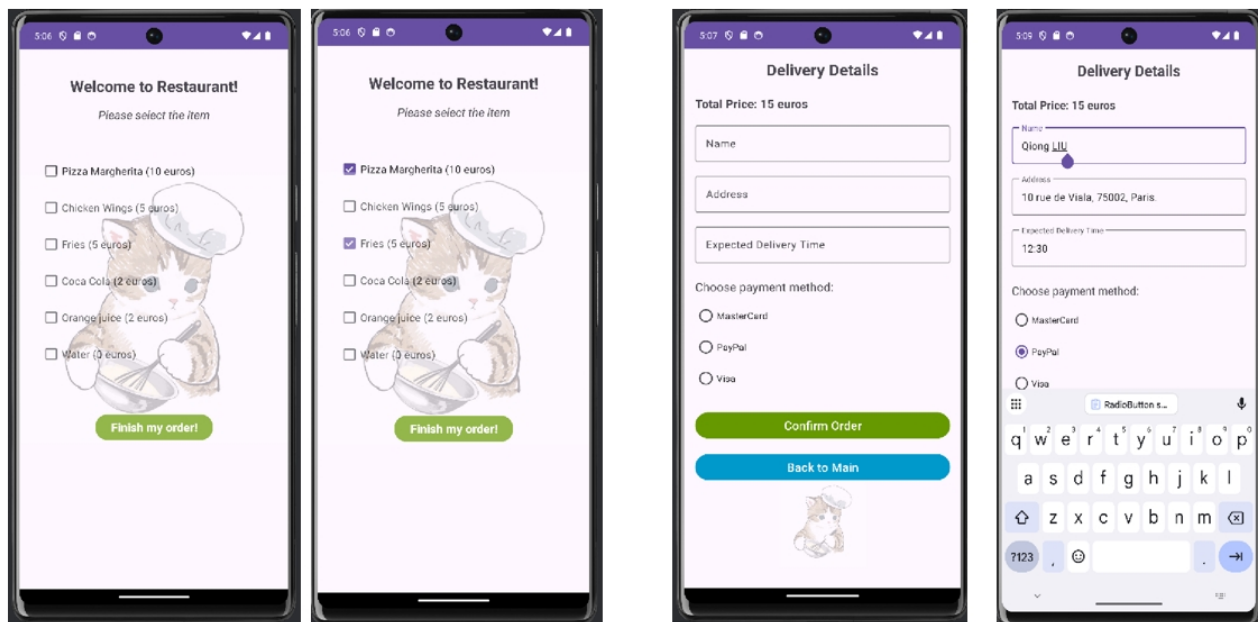
- Activity 1: Menu Selection

    - Display a menu from which customers can choose their meals. Each item in the menu should have a predefined price.

    - Include an "Finish my Order!" button that calculates and displays the total price on the next page when clicked. Pass the total price as intent extra data.

    - If no items are selected and the "Order" button is pressed, display an error message: "Select food." Extra: Personalize the app by adding an image of yourself to the menu page.

- Activity 2: Delivery and Payment Details

    - Start by displaying the total price passed from the first activity.

    - Provide fields for entering personal information and choosing a payment method.

    - If the "Order" button is pressed and any delivery detail is missing, show an error message: "Fill in the delivery information."

- Include options to either confirm the order or return to the main menu to make changes or add more items.
- Extra bonus: Restrict the payment method selection to only one choice at a time.
- Extra bonus: Integrate a Google library to enhance input methods, allowing for a smoother keyboard interaction.

3 Tips

There are some tips that might useful for you, it is not necessary to follow the same steps.

3.1 Layout

- Menu display:
    - Set text size and style, button background

```
1  <TextView
2  android:id="@+id/textView1"
3  android:layout_width="wrap_content"
4  android:layout_height="wrap_content"
5  android:text="Welcome to Restaurant!"
6  android:textSize="24sp"
7  android:textStyle="bold"
8  app:layout_constraintTop_toTopOf="parent"
9  app:layout_constraintStart_toStartOf="parent"
10 app:layout_constraintEnd_toEndOf="parent"
11 android:layout_marginTop="? dp" />
```

```
1  android:textSize="18sp"
2  android:textStyle="bold"
3  android:backgroundTint="@android:color/holo_green_dark"
4  android:textColor="@android:color/white"
```

    - how to align with previous item:

```
1  app:layout_constraintTop_toBottomOf="@id/textView1"
2  app:layout_constraintStart_toStartOf="parent"
3  app:layout_constraintEnd_toEndOf="parent"
4  android:layout_marginTop="? dp"
```

    - how to define checkbox?

```
1   <CheckBox
2  android:id="@+id/checkBox4"
3  ..... />
```

    - - how to add an image?

```
1  <ImageView
2  android:id="@+id/cartoonImage"
3  android:alpha="0.3"
4  android:src="@drawable/chefcat"
5  ... define your layout/>
```

    - how to use google materials to show the keyboard?

```
1  <!-- Name Input -->
2  <com.google.android.material.textfield.TextInputLayout
3      android:layout_width="match_parent"
4      android:layout_height="wrap_content"
5      android:hint="Name"
6      android:layout_marginBottom="16dp">
7
8      <com.google.android.material.textfield.TextInputEditText
9          android:id="@+id/nameInput"
```

```
10    android:layout_width="match_parent"
11    android:layout_height="wrap_content"
12    android:inputType="textPersonName" />
13  </com.google.android.material.textfield.TextInputLayout>
```

- you can use `RadioButton` to restrict the choice of payment, i.e., only one payment choice is allowed.

```
1   <RadioGroup
2   android:id="@+id/paymentMethodGroup"
3   android:layout_width="match_parent"
4   android:layout_height="wrap_content"
5   android:orientation="vertical">
6       <RadioButton
7           android:id=/>
8
9       <RadioButton
10          android:id= />
11
12      <RadioButton
13          android:id= />
14  </RadioGroup>
```

- Java code

    - – how to set button click listener

```
1   // set button click listener
2   finishOrderButton.setOnClickListener(new View.OnClickListener() {
3       @Override
4       public void onClick(View v) {
5           calculateTotalAndProceed();
6       }
7   });
```

    - how to set an extra intent?

```
1   Intent intent = new Intent(MainActivity.this, DeliveryActivity.class);
2       intent.putExtra("TOTAL_PRICE", totalPrice);
3       startActivity(intent);
```

    - how to validate input fields?

```
1   // Validate input fields
2   if (name.isEmpty() || address.isEmpty() || deliveryTime.isEmpty()) {
3       Toast.makeText(this, "Please fill out all fields.", Toast.LENGTH_SHORT).
            show();
4       return;
5   }
```