Assignment1

Name: Siyu Liu

Student ID: 8859412

# Screenshots

Loading Screenshots

A screenshot of a phone login form

Description automatically generated with low confidence A screenshot of a computer

Description automatically generated with low confidence

Validation Working Screenshots

A screenshot of a phone survey

Description automatically generated with low confidence A screenshot of a survey

Description automatically generated with medium confidence

Bill Screenshot

A screenshot of a computer

Description automatically generated with low confidence

# Source Code

## activity\_main.xml

<?xml version="1.0" encoding="utf-8"?>  
<LinearLayout 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:id="@+id/root"  
 android:layout\_width="match\_parent"  
 android:layout\_height="match\_parent"  
 android:orientation="vertical"  
 tools:context=".MainActivity">  
  
 <com.google.android.material.appbar.MaterialToolbar  
 android:id="@+id/materialToolbar2"  
 android:layout\_width="match\_parent"  
 android:layout\_height="wrap\_content"  
 android:background="?attr/colorPrimary"  
 android:minHeight="?attr/actionBarSize"  
 android:paddingTop="15dp"  
 android:paddingBottom="15dp"  
 android:theme="?attr/actionBarTheme"  
 app:logo="@drawable/logo"  
 app:title="@string/app\_title"  
 app:titleMarginStart="30dp"  
 app:titleTextColor="@color/secondary" />  
  
 <ScrollView  
 android:layout\_width="match\_parent"  
 android:layout\_height="wrap\_content"  
 android:orientation="vertical">  
  
 <LinearLayout  
 android:layout\_width="match\_parent"  
 android:layout\_height="wrap\_content"  
 android:orientation="vertical"  
 android:paddingStart="20dp"  
 android:paddingTop="40dp"  
 android:paddingEnd="20dp"  
 android:paddingBottom="40dp">  
  
 <com.google.android.material.textfield.TextInputLayout  
 android:layout\_width="match\_parent"  
 android:layout\_height="wrap\_content"  
 android:layout\_marginBottom="20dp"  
 app:boxStrokeColor="@color/primary">  
  
 <com.google.android.material.textfield.TextInputEditText  
 android:id="@+id/customer\_name\_input"  
 android:layout\_width="match\_parent"  
 android:layout\_height="wrap\_content"  
 android:hint="@string/customer\_name\_label" />  
 </com.google.android.material.textfield.TextInputLayout>  
  
 <com.google.android.material.textfield.TextInputLayout  
 android:layout\_width="match\_parent"  
 android:layout\_height="wrap\_content"  
 android:layout\_marginBottom="20dp"  
 app:boxStrokeColor="@color/primary">  
  
 <com.google.android.material.textfield.TextInputEditText  
 android:id="@+id/email\_address\_input"  
 android:layout\_width="match\_parent"  
 android:layout\_height="wrap\_content"  
 android:hint="@string/email\_address\_label"  
 android:inputType="textEmailAddress" />  
 </com.google.android.material.textfield.TextInputLayout>  
  
 <com.google.android.material.textfield.TextInputLayout  
 android:layout\_width="match\_parent"  
 android:layout\_height="wrap\_content"  
 android:layout\_marginBottom="20dp"  
 app:boxStrokeColor="@color/primary">  
  
 <com.google.android.material.textfield.TextInputEditText  
 android:id="@+id/phone\_number\_input"  
 android:layout\_width="match\_parent"  
 android:layout\_height="wrap\_content"  
 android:hint="@string/phone\_number\_label"  
 android:inputType="phone" />  
 </com.google.android.material.textfield.TextInputLayout>  
  
 <TextView  
 android:layout\_width="match\_parent"  
 android:layout\_height="wrap\_content"  
 android:text="@string/type\_label" />  
  
 <RadioGroup  
 android:id="@+id/type\_radio\_group"  
 android:layout\_width="match\_parent"  
 android:layout\_height="match\_parent"  
 android:layout\_marginBottom="20dp">  
  
 <RadioButton  
 android:id="@+id/type\_radio\_tea"  
 android:layout\_width="match\_parent"  
 android:layout\_height="wrap\_content"  
 android:text="@string/type\_radio\_option1" />  
  
 <RadioButton  
 android:id="@+id/type\_radio\_coffee"  
 android:layout\_width="match\_parent"  
 android:layout\_height="wrap\_content"  
 android:text="@string/type\_radio\_option2" />  
 </RadioGroup>  
  
 <TextView  
 android:layout\_width="match\_parent"  
 android:layout\_height="wrap\_content"  
 android:text="@string/additional\_label" />  
  
 <CheckBox  
 android:id="@+id/additional\_checkbox\_milk"  
 android:layout\_width="match\_parent"  
 android:layout\_height="wrap\_content"  
 android:text="@string/additional\_checkbox\_option1" />  
  
 <CheckBox  
 android:id="@+id/additional\_checkbox\_sugar"  
 android:layout\_width="match\_parent"  
 android:layout\_height="wrap\_content"  
 android:text="@string/additional\_checkbox\_option2" />  
  
 <TextView  
 android:layout\_width="match\_parent"  
 android:layout\_height="wrap\_content"  
 android:layout\_marginTop="20dp"  
 android:text="@string/size\_label" />  
  
 <RadioGroup  
 android:id="@+id/size\_radio\_group"  
 android:layout\_width="match\_parent"  
 android:layout\_height="wrap\_content"  
 android:layout\_marginBottom="20dp">  
  
 <RadioButton  
 android:id="@+id/size\_radio\_small"  
 android:layout\_width="match\_parent"  
 android:layout\_height="wrap\_content"  
 android:text="@string/size\_radio\_option1" />  
  
 <RadioButton  
 android:id="@+id/size\_radio\_medium"  
 android:layout\_width="match\_parent"  
 android:layout\_height="wrap\_content"  
 android:text="@string/size\_radio\_option2" />  
  
 <RadioButton  
 android:id="@+id/size\_radio\_large"  
 android:layout\_width="match\_parent"  
 android:layout\_height="wrap\_content"  
 android:text="@string/size\_radio\_option3" />  
 </RadioGroup>  
  
 <TextView  
 android:layout\_width="match\_parent"  
 android:layout\_height="wrap\_content"  
 android:layout\_marginBottom="10dp"  
 android:text="@string/flavour\_label" />  
  
 <Spinner  
 android:id="@+id/flavour\_spinner"  
 android:layout\_width="match\_parent"  
 android:layout\_height="wrap\_content"  
 android:layout\_marginBottom="20dp"  
 android:background="@drawable/spinner\_border"  
 android:padding="5dp" />  
  
 <com.google.android.material.textfield.TextInputLayout  
 android:layout\_width="match\_parent"  
 android:layout\_height="wrap\_content"  
 android:layout\_marginBottom="20dp"  
 app:boxStrokeColor="@color/primary">  
  
 <AutoCompleteTextView  
 android:id="@+id/region\_autocomplete"  
 android:layout\_width="match\_parent"  
 android:layout\_height="wrap\_content"  
 android:hint="@string/region\_label"  
 android:padding="15dp" />  
 </com.google.android.material.textfield.TextInputLayout>  
  
 <TextView  
 android:layout\_width="match\_parent"  
 android:layout\_height="wrap\_content"  
 android:layout\_marginBottom="10dp"  
 android:text="@string/store\_label" />  
  
 <Spinner  
 android:id="@+id/store\_spinner"  
 android:layout\_width="match\_parent"  
 android:layout\_height="wrap\_content"  
 android:layout\_marginBottom="20dp"  
 android:background="@drawable/spinner\_border"  
 android:padding="5dp" />  
  
 <com.google.android.material.textfield.TextInputLayout  
 android:layout\_width="match\_parent"  
 android:layout\_height="wrap\_content"  
 android:layout\_marginBottom="40dp"  
 app:boxStrokeColor="@color/primary">  
  
 <com.google.android.material.textfield.TextInputEditText  
 android:id="@+id/sale\_date"  
 android:layout\_width="match\_parent"  
 android:layout\_height="wrap\_content"  
 android:hint="@string/sale\_date\_label" />  
 </com.google.android.material.textfield.TextInputLayout>  
  
 <com.google.android.material.button.MaterialButton  
 android:id="@+id/submit\_button"  
 android:layout\_width="match\_parent"  
 android:layout\_height="wrap\_content"  
 android:text="@string/submit\_button\_label" />  
  
 </LinearLayout>  
  
 </ScrollView>  
  
</LinearLayout>

## strings.xml

<resources>  
 <string name="app\_name">SiyuAssignment1</string>  
 <string name="app\_title">Delicia Beverage</string>  
 <string name="customer\_name\_label">Customer Name</string>  
 <string name="email\_address\_label">Email Address</string>  
 <string name="phone\_number\_label">Phone Number</string>  
 <string name="type\_label">Type of Beverage: </string>  
 <string name="type\_radio\_option1">Tea</string>  
 <string name="type\_radio\_option2">Coffee</string>  
 <string name="additional\_label">Additional: </string>  
 <string name="additional\_checkbox\_option1">Milk</string>  
 <string name="additional\_checkbox\_option2">Sugar</string>  
 <string name="size\_label">Size of Beverage:</string>  
 <string name="size\_radio\_option1">Small</string>  
 <string name="size\_radio\_option2">Medium</string>  
 <string name="size\_radio\_option3">Large</string>  
 <string name="flavour\_label">Added flavourings:</string>  
 <string name="region\_label">Region</string>  
 <string name="store\_label">Store</string>  
 <string name="sale\_date\_label">Sale Date</string>  
 <string name="submit\_button\_label">Print Bill</string>  
</resources>

## MainActivity.java

package com.example.siyuassignment1;  
  
import android.annotation.SuppressLint;  
import android.app.DatePickerDialog;  
import android.os.Bundle;  
import android.text.Editable;  
import android.text.InputType;  
import android.text.TextWatcher;  
import android.view.View;  
import android.widget.AdapterView;  
import android.widget.RadioGroup;  
  
import androidx.appcompat.app.AppCompatActivity;  
  
import com.example.siyuassignment1.databinding.ActivityMainBinding;  
import com.example.siyuassignment1.models.Validations;  
import com.example.siyuassignment1.models.dataSource;  
  
import java.util.Calendar;  
import java.util.Objects;  
  
public class MainActivity extends AppCompatActivity implements AdapterView.OnItemSelectedListener, RadioGroup.OnCheckedChangeListener, View.OnClickListener {  
  
 ActivityMainBinding binding;  
 dataSource data\_source;  
 // properties  
 String beverage\_type = "coffee";  
 boolean additional\_mike;  
 boolean additional\_sugar;  
 String beverage\_size = "";  
 String adding\_flavour = "None";  
 String City = "";  
 String Store = "";  
 DatePickerDialog datePicker;  
  
 @Override  
 protected void onCreate(Bundle savedInstanceState) {  
 super.onCreate(savedInstanceState);  
 // set binding  
 binding = ActivityMainBinding.*inflate*(getLayoutInflater());  
 View view = binding.getRoot();  
 setContentView(view);  
  
 // set data source to handle dynamic adaptor  
 data\_source = new dataSource(this);  
 binding.typeRadioCoffee.setChecked(true);  
 binding.saleDate.setFocusable(false);  
 binding.saleDate.setInputType(InputType.*TYPE\_NULL*);  
  
 // set adaptors  
 SetAdaptors();  
 // set listeners  
 SetListeners();  
 }  
  
 // default adaptors setting  
 private void SetAdaptors() {  
 binding.flavourSpinner.setAdapter(data\_source.coffeeFlavourAdaptor);  
 // city autocomplete widget  
 binding.regionAutocomplete.setThreshold(2);  
 binding.regionAutocomplete.setInputType(InputType.*TYPE\_NULL*);  
 binding.regionAutocomplete.setAdapter(data\_source.GetCityAdapter());  
 binding.storeSpinner.setAdapter(data\_source.emptyAdaptor);  
 }  
  
 private void SetListeners() {  
 binding.regionAutocomplete.setOnClickListener(this);  
 binding.typeRadioGroup.setOnCheckedChangeListener(this);  
 binding.additionalCheckboxMilk.setOnClickListener(this);  
 binding.additionalCheckboxSugar.setOnClickListener(this);  
 binding.sizeRadioGroup.setOnCheckedChangeListener(this);  
 binding.regionAutocomplete.addTextChangedListener(new TextWatcher() {  
 @Override  
 public void beforeTextChanged(CharSequence s, int start, int count, int after) {  
  
 }  
  
 @Override  
 public void onTextChanged(CharSequence s, int start, int before, int count) {  
 String city\_string = binding.regionAutocomplete.getText().toString();  
 if (!Objects.*isNull*(data\_source.cities\_stores.get(city\_string))) {  
 binding.storeSpinner.setAdapter(data\_source.GetStoreAdapter(city\_string));  
 // Set the first one as default store  
 if (!Objects.*isNull*(data\_source.cities\_stores.get(city\_string)) && data\_source.cities\_stores.get(city\_string).size() > 0) {  
 City = city\_string;  
 Store = data\_source.cities\_stores.get(city\_string).get(0);  
 }  
 } else {  
 binding.storeSpinner.setAdapter(data\_source.emptyAdaptor);  
 City = "";  
 Store = "";  
 }  
 }  
  
 @Override  
 public void afterTextChanged(Editable s) {  
  
 }  
 });  
 binding.flavourSpinner.setOnItemSelectedListener(this);  
 binding.storeSpinner.setOnItemSelectedListener(this);  
 binding.saleDate.setOnClickListener(this);  
 binding.submitButton.setOnClickListener(this);  
 }  
  
 @SuppressLint("DefaultLocale")  
 @Override  
 public void onClick(View v) {  
 // datePicker's click event  
 if (v.getId() == binding.saleDate.getId()) {  
 Calendar cal = Calendar.*getInstance*();  
 int saleDay = cal.get(Calendar.*DAY\_OF\_MONTH*);  
 int saleMonth = cal.get(Calendar.*MONTH*);  
 int saleYear = cal.get(Calendar.*YEAR*);  
 datePicker = new DatePickerDialog(this, (view, year, month, dayOfMonth) -> binding.saleDate.setText(String.*format*("%d/%d/%d", year, month + 1, dayOfMonth)), saleYear, saleMonth, saleDay);  
 datePicker.show();  
 }  
 // Checkbox click  
 else if (v.getId() == binding.additionalCheckboxMilk.getId()) {  
 additional\_mike = binding.additionalCheckboxMilk.isChecked();  
 } else if (v.getId() == binding.additionalCheckboxSugar.getId()) {  
 additional\_sugar = binding.additionalCheckboxSugar.isChecked();  
 }  
 // Button's click action, validate and generate the list  
 else if (v.getId() == binding.submitButton.getId()) {  
 Validations.*validate*(binding, beverage\_type, additional\_mike, additional\_sugar, beverage\_size, adding\_flavour, City, Store);  
 }  
 }  
  
 @Override  
 public void onCheckedChanged(RadioGroup group, int checkedId) {  
 // when changing the beverage type, changing the flavouring adaptor  
 if (group.getId() == binding.typeRadioGroup.getId()) {  
 if (checkedId == binding.typeRadioCoffee.getId()) {  
 binding.flavourSpinner.setAdapter(data\_source.coffeeFlavourAdaptor);  
 beverage\_type = "coffee";  
 } else if (checkedId == binding.typeRadioTea.getId()) {  
 binding.flavourSpinner.setAdapter(data\_source.teaFlavourAdaptor);  
 beverage\_type = "tea";  
 }  
 }  
 // when tapping the radio button of  
 else if (group.getId() == binding.sizeRadioGroup.getId()) {  
 if (checkedId == binding.sizeRadioSmall.getId()) {  
 beverage\_size = "small";  
 } else if (checkedId == binding.sizeRadioMedium.getId()) {  
 beverage\_size = "medium";  
 } else if (checkedId == binding.sizeRadioLarge.getId()) {  
 beverage\_size = "large";  
 }  
 }  
 }  
  
 @Override  
 public void onItemSelected(AdapterView<?> parent, View view, int position, long id) {  
 // Store is selecting  
 if (!City.isEmpty() && parent.getId() == binding.storeSpinner.getId()) {  
 Store = data\_source.cities\_stores.get(City).get(position);  
 }  
 // additional flavoring is selecting  
 else if (parent.getId() == binding.flavourSpinner.getId()) {  
 adding\_flavour = "None";  
 if (Objects.*equals*(beverage\_type, "coffee")) {  
 adding\_flavour = data\_source.coffeeFlavourAdaptor.getItem(position).toString();  
 } else if (Objects.*equals*(beverage\_type, "tea")) {  
 adding\_flavour = data\_source.teaFlavourAdaptor.getItem(position).toString();  
 }  
 }  
 }  
  
 @Override  
 public void onNothingSelected(AdapterView<?> parent) {  
  
 }  
}

## dataSource.java

package com.example.siyuassignment1.models;  
  
import android.content.Context;  
import android.widget.ArrayAdapter;  
  
import java.util.ArrayList;  
import java.util.Arrays;  
import java.util.HashMap;  
  
public class dataSource {  
 private final Context context;  
 public HashMap<String, ArrayList<String>> cities\_stores = new HashMap<>();  
 public ArrayAdapter coffeeFlavourAdaptor;  
 public ArrayAdapter teaFlavourAdaptor;  
 public ArrayAdapter emptyAdaptor;  
  
 public dataSource(Context context) {  
 AddCityStores("Waterloo", new String[]{"65 University Ave E", "415 King St", "585 Weber St"});  
 AddCityStores("London", new String[]{"616 Wharncliffe Rd", "1885 Huron St", "670 Wonderland Road", "1181 Highbury Ave"});  
 AddCityStores("Milton", new String[]{"900 Steeles Ave", "80 Market Dr", "820 Main St"});  
 AddCityStores("Mississauga", new String[]{"144 Dundas St", "30 Eglinton Ave", "6075 Creditview Rd"});  
 // cities\_stores  
 this.context = context;  
 emptyAdaptor = GenerateAdapter(new String[]{"None"});  
 // flavouring source  
 coffeeFlavourAdaptor = GenerateAdapter(new String[]{"None", "Pumpkin Spice", "Chocolate"});  
 teaFlavourAdaptor = GenerateAdapter(new String[]{"None", "Lemon", "Ginger"});  
 }  
  
 public void AddCityStores(String city, String[] stores) {  
 cities\_stores.put(city, new ArrayList<String>(Arrays.*asList*(stores)));  
 }  
  
 public ArrayAdapter GetCityAdapter() {  
 String[] cities = new String[cities\_stores.size()];  
 cities\_stores.keySet().toArray(cities);  
 return GenerateAdapter(cities);  
 }  
  
 public ArrayAdapter GetStoreAdapter(String city) {  
 String[] stores = new String[cities\_stores.get(city).size()];  
 cities\_stores.get(city).toArray(stores);  
 return GenerateAdapter(stores);  
 }  
  
 private ArrayAdapter GenerateAdapter(String[] source) {  
 return new ArrayAdapter(context, androidx.appcompat.R.layout.*support\_simple\_spinner\_dropdown\_item*, source);  
 }  
}

## Validations.java

package com.example.siyuassignment1.models;  
  
import android.view.View;  
import android.widget.TextView;  
  
import com.example.siyuassignment1.databinding.ActivityMainBinding;  
import com.google.android.material.snackbar.BaseTransientBottomBar;  
import com.google.android.material.snackbar.Snackbar;  
  
import java.time.LocalDate;  
import java.util.regex.Pattern;  
  
public class Validations {  
 public static boolean validate(ActivityMainBinding binding, String beverage\_type, Boolean additional\_mike, Boolean additional\_sugar, String beverage\_size, String adding\_flavour, String City, String Store) {  
 // Customer Name  
 String customer\_name = binding.customerNameInput.getText().toString();  
 if (customer\_name.isEmpty()) {  
 *DisplayMessage*(binding, "Customer Name is Empty");  
 binding.customerNameInput.setError("Customer Name is Empty");  
 return false;  
 }  
  
 // Email Address  
 String email\_address = binding.emailAddressInput.getText().toString();  
 Pattern email\_regex = Pattern.*compile*("^[a-zA-Z0-9.\_%+-]+@[a-zA-Z0-9.-]+\\.[a-zA-Z]{2,}$");  
 if (!email\_regex.matcher(email\_address).matches()) {  
 *DisplayMessage*(binding, "Email Address Format is Incorrect");  
 binding.emailAddressInput.setError("Email Address Format is Incorrect");  
 return false;  
 }  
  
 // Phone Number  
 String phone\_number = binding.phoneNumberInput.getText().toString();  
 Pattern phone\_regex = Pattern.*compile*("^\\d{3}-\\d{3}-\\d{4}$");  
 if (!phone\_regex.matcher(phone\_number).matches()) {  
 *DisplayMessage*(binding, "Phone Format is Incorrect");  
 binding.phoneNumberInput.setError("Phone Format is Incorrect");  
 return false;  
 }  
  
 // Beverage Size  
 if (beverage\_size.isEmpty()) {  
 *DisplayMessage*(binding, "Beverage Size Should be Selected");  
 return false;  
 }  
  
 // City  
 if (City.isEmpty()) {  
 *DisplayMessage*(binding, "City is Empty or Incorrect");  
 return false;  
 }  
  
 // Store  
 if (Store.isEmpty()) {  
 *DisplayMessage*(binding, "Store Should be Selected");  
 return false;  
 }  
  
 // Date  
 String sale\_date = binding.saleDate.getText().toString();  
 if (sale\_date.isEmpty()) {  
 *DisplayMessage*(binding, "Sale Date Should be Selected");  
 binding.saleDate.setError("Sale Date Should be Selected");  
 return false;  
 } else {  
 String[] date\_array = sale\_date.split("/");  
 int year = Integer.*parseInt*(date\_array[0]);  
 int month = Integer.*parseInt*(date\_array[1]);  
 int day = Integer.*parseInt*(date\_array[2]);  
 LocalDate current\_date = LocalDate.*now*();  
 LocalDate picked\_date = LocalDate.*of*(year, month, day);  
 if (current\_date.isBefore(picked\_date)) {  
 binding.saleDate.setError("Sale Date Should Before the Current Date");  
 *DisplayMessage*(binding, "Sale Date Should Before the Current Date");  
 return false;  
 }  
 binding.saleDate.setError(null);  
 }  
  
 OrderGenerator orderGenerator = new OrderGenerator(customer\_name, email\_address, phone\_number, beverage\_type, additional\_mike, additional\_sugar, beverage\_size, adding\_flavour, City, Store, sale\_date);  
 *DisplayMessage*(binding, orderGenerator.Generate());  
 return true;  
 }  
  
 public static void DisplayMessage(ActivityMainBinding binding, String message) {  
 Snackbar snackbar = Snackbar.*make*(binding.root, message, BaseTransientBottomBar.*LENGTH\_INDEFINITE*);  
 View snackbarView = snackbar.getView();  
 TextView tv = snackbarView.findViewById(com.google.android.material.R.id.*snackbar\_text*);  
 tv.setMaxLines(99);  
 snackbar.setAction("OK", v -> {  
 }).show();  
 }  
}

## OrderGenerator.java

package com.example.siyuassignment1.models;  
  
import java.util.HashMap;  
  
public class OrderGenerator {  
 private final String customer\_name;  
 private final String email\_address;  
 private final String phone\_number;  
 private final String beverage\_type;  
 private final boolean additional\_mike;  
 private final boolean additional\_sugar;  
 private final String beverage\_size;  
 private final String flavouring;  
 private final double tax\_rate = 0.13;  
 private final HashMap<String, Double> additional = new HashMap<>();  
 private final HashMap<String, Double> tea\_size = new HashMap<>();  
 private final HashMap<String, Double> coffee\_size = new HashMap<>();  
 private final HashMap<String, Double> flavourings = new HashMap<>();  
 private final String City;  
 private final String Store;  
 private final String sale\_date;  
  
 public OrderGenerator(String customer\_name, String email\_address, String phone\_number, String beverage\_type, boolean additional\_mike, boolean additional\_sugar, String beverage\_size, String flavouring, String City, String Store, String sale\_date) {  
 this.customer\_name = customer\_name;  
 this.email\_address = email\_address;  
 this.phone\_number = phone\_number;  
 this.beverage\_type = beverage\_type;  
 this.additional\_mike = additional\_mike;  
 this.additional\_sugar = additional\_sugar;  
 this.beverage\_size = beverage\_size;  
 this.flavouring = flavouring;  
 this.City = City;  
 this.Store = Store;  
 this.sale\_date = sale\_date;  
 SetValues();  
 }  
  
 public String Generate() {  
 String print\_string = "";  
 print\_string += "Custom Name: " + customer\_name + "\n";  
 print\_string += "Email Address: " + email\_address + "\n";  
 print\_string += "Phone Number: " + phone\_number + "\n";  
 print\_string += "Beverage Type: " + beverage\_type + "\n";  
 print\_string += "Add Milk: " + (additional\_mike ? "Yes" : "No") + "\n";  
 print\_string += "Add Sugar: " + (additional\_sugar ? "Yes" : "No") + "\n";  
 print\_string += "Beverage Size: " + beverage\_size + "\n";  
 print\_string += "Flavouring: " + flavouring + "\n";  
 print\_string += "City: " + City + "\n";  
 print\_string += "Store: " + Store + "\n";  
 print\_string += "Sale Date: " + sale\_date + "\n";  
 print\_string += "Price: $" + PriceCalculate() + "\n";  
 return print\_string;  
 }  
  
 private String PriceCalculate() {  
 HashMap<String, Double> size = new HashMap<>();  
 if (beverage\_type.equals("coffee")) {  
 size = coffee\_size;  
 } else if (beverage\_type.equals("tea")) {  
 size = tea\_size;  
 }  
 Double total\_price = size.get(beverage\_size) + (additional\_mike ? additional.get("milk") : 0) + (additional\_sugar ? additional.get("sugar") : 0) + flavourings.get(flavouring);  
 return String.*format*("%.2f", total\_price \* (1 + tax\_rate));  
 }  
  
 private void SetValues() {  
 // additional  
 this.additional.put("milk", 1.25);  
 this.additional.put("sugar", 1.0);  
 // sizes  
 this.tea\_size.put("small", 1.5);  
 this.tea\_size.put("medium", 2.5);  
 this.tea\_size.put("large", 3.25);  
 this.coffee\_size.put("small", 1.75);  
 this.coffee\_size.put("medium", 2.75);  
 this.coffee\_size.put("large", 3.75);  
 // flavouring  
 this.flavourings.put("None", 0.0);  
 this.flavourings.put("Lemon", 0.25);  
 this.flavourings.put("Ginger", 0.75);  
 this.flavourings.put("Pumpkin Spice", 0.5);  
 this.flavourings.put("Chocolate", 0.75);  
 }  
  
  
}