SKE14 Restaurant

Project Description

The project is about the simulate restaurant program. It can be order foods, know the status of ordered foods and check bill.

Why this worth doing

1. To avoid the problems that may be caused by staff such as calling them but they don't hear, they remember user's menu wrong.
2. The customer know that their order was cooked or not.
3. The restaurant don't need to waste their time take an order.
4. The price can be calculate fairly.

Technology

- We have used 2 Main programs. There are

1.SceneBuilder : design many features of the program and decorate it.

2.Eclipse : write the action, command, computabilty of the programs by using javafx.

- In Eclipse, we have to install new 2 softwares, there are

1. e(fx)clipse , we can download from Help > Install New Software.
2. jfoenix.jar , we add to eclipse by build path to our project.

Interesting Codes

JavaFX

- A media and graphics framework for creating GUIs in Java applications.
- Intended to repleace Swing in JavaSE.
- More powerful than Swing in JavaSE.
- Makes use of FXML (new XML-based mark-up language for defining UIs).

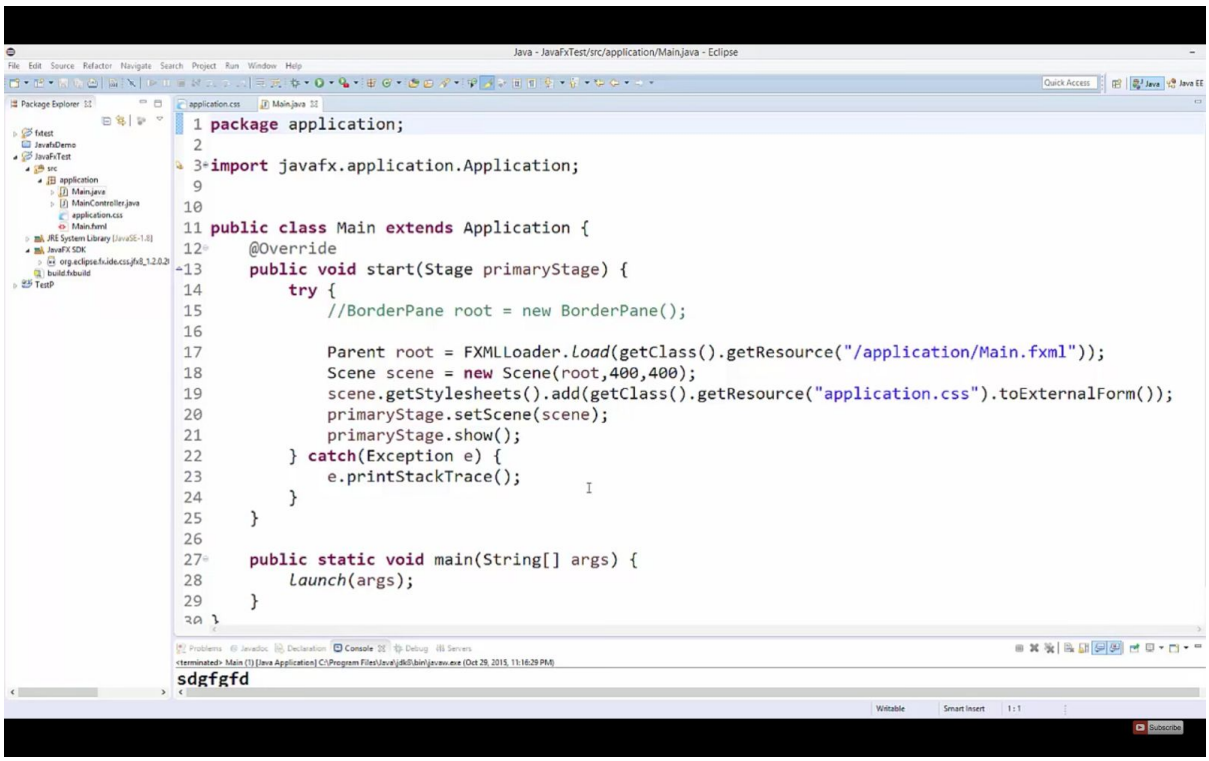
SceneBuilder Program

- Oracles provides you with JavaFX SceneBuilder.
- 3D Support.

Basic Concept in SceneBuilder

- javafx.scene.Parent is the base class for other child.
- javafx.scene.Scene is the container for all content in the Parent.
- javafx.stage.Stage is JavaFX container. The primary Stage is constructed by the platform. Additional Stage objects may be constructed by the application.
- javafx.stage.Modality is the enum that define all posible type of stage.

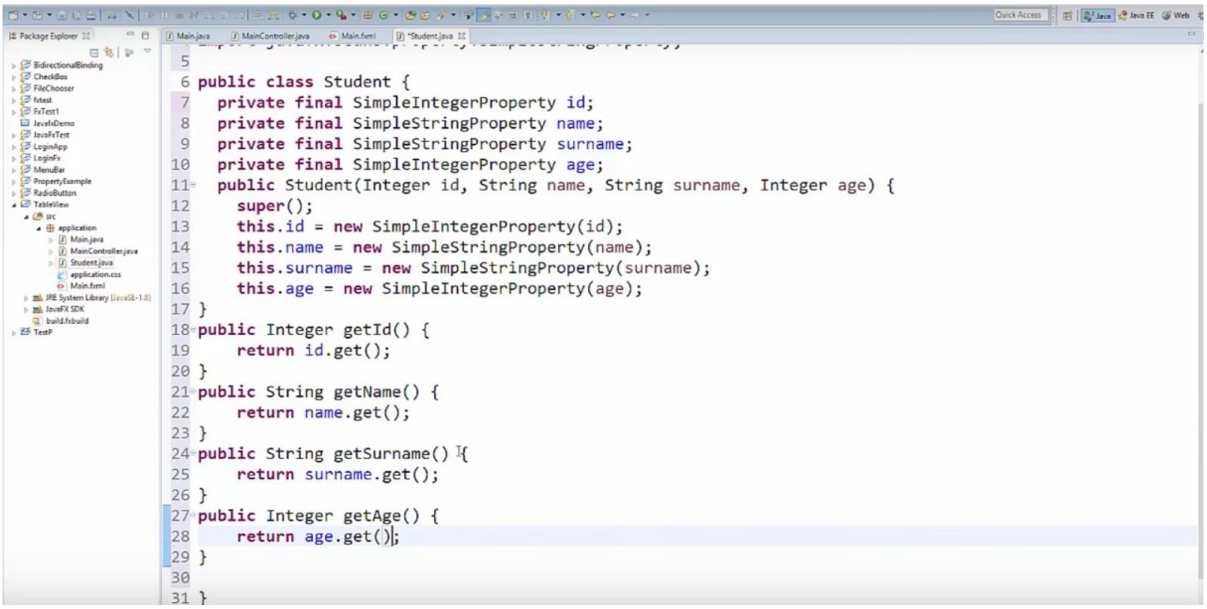
Basic starter code in JavaFX



- Main class have to extends Application class.
- The program will overide start method for us.
- In main method , “Launch(args)” used to call our javafx program.
- We have to put the layout into the scene ,and put scene into the stage. The stage is the biggest, it’s like a frame in the java swing.
- “Parent root = FXMLLoader…….” used to run the fxml file.
- “Scene scene = new Scene(root,400,400)” used to set the scene and put the content from fxml file into it.
- “scene.getStyleSheet()……..” used to load css file to decorate the program.
- “primaryStage.setScene(scene)” used to put the previous scene into the stage.
- “primaryStage.show()” used to show the stage.

SimpleStringProperty & SimpleIntegerProperty class

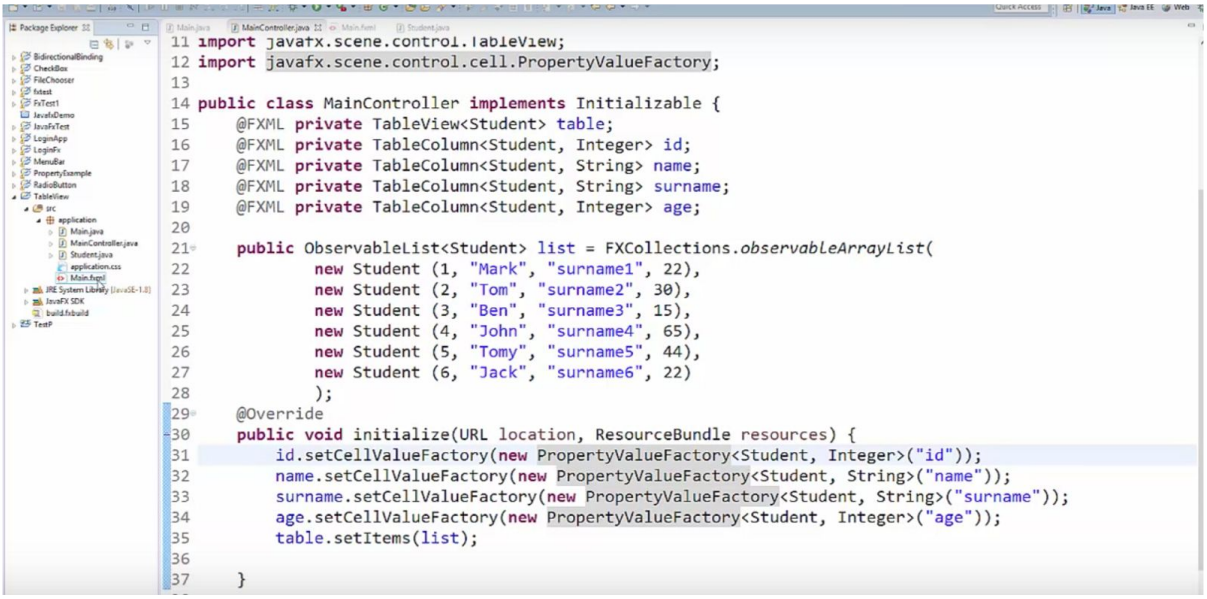
- It was an listenable elements. When properties are used, if the value of a property attribute in the data model changes, the view of the item in the TableView will automatically updated to match the updated data model value. ex. menuID = new SimpleIntegerProperty(inputMenuNum);



```
5
6  public class Student {
7    private final SimpleIntegerProperty id;
8    private final SimpleStringProperty name;
9    private final SimpleStringProperty surname;
10   private final SimpleIntegerProperty age;
11   public Student(Integer id, String name, String surname, Integer age) {
12     super();
13     this.id = new SimpleIntegerProperty(id);
14     this.name = new SimpleStringProperty(name);
15     this.surname = new SimpleStringProperty(surname);
16     this.age = new SimpleIntegerProperty(age);
17 }
18 public Integer getId() {
19     return id.get();
20 }
21 public String getName() {
22     return name.get();
23 }
24 public String getSurname() {
25     return surname.get();
26 }
27 public Integer getAge() {
28     return age.get();
29 }
30
31 }
```

- This is the example usage of SimpleStringProperty & SimpleIntegerProperty class.
- We can access to their value by get method.

JavaFX TableView



```
11 import javafx.scene.control.TableView;
12 import javafx.scene.control.cell.PropertyValueFactory;
13
14 public class MainController implements Initializable {
15     @FXML private TableView<Student> table;
16     @FXML private TableColumn<Student, Integer> id;
17     @FXML private TableColumn<Student, String> name;
18     @FXML private TableColumn<Student, String> surname;
19     @FXML private TableColumn<Student, Integer> age;
20
21     public ObservableList<Student> list = FXCollections.observableArrayList(
22             new Student (1, "Mark", "surname1", 22),
23             new Student (2, "Tom", "surname2", 30),
24             new Student (3, "Ben", "surname3", 15),
25             new Student (4, "John", "surname4", 65),
26             new Student (5, "Tomy", "surname5", 44),
27             new Student (6, "Jack", "surname6", 22)
28             );
29     @Override
30     public void initialize(URL location, ResourceBundle resources) {
31         id.setCellValueFactory(new PropertyValueFactory<Student, Integer>("id"));
32         name.setCellValueFactory(new PropertyValueFactory<Student, String>("name"));
33         surname.setCellValueFactory(new PropertyValueFactory<Student, String>("surname"));
34         age.setCellValueFactory(new PropertyValueFactory<Student, Integer>("age"));
35         table.setItems(list);
36
37     }
```

- Create TableView with each TableColumn in it.
- Declare data type in TableView to Student, and declare data type in each TableColumn to Student-Integer or Student-String.
- Implements Initializable class means to override initialize method after program finishes constructor , it will be run this method.
- *.setCellValueFactory() used to Sets the value of the property cellValueFactory.
- Variable before “setCallValueFactory()” is related to variable in each TableColumn.
- Variable before “new PropertyValueFactory<>()” is related to the variable in Student class.
- *.setItems() is used to add List to display in the table.

Project Instruction

1. Make sure you have Java version 8
2. Download jar file from Github MenuProject https://github.com/csupisara/MenuProject
3. Open the jar file
4. Choose which menu do you want to order.
5. Click CONFIRM button to send the order.
6. The order will appear at STATUS tab, which will include the status of each order that it was already be cook or not.
7. If you want to order more, you can go back to the CONFIRM tab.
8. When you finish your meal, you can click at CHECKBILL button. Then, the bill will send in txt file to the waiter.

Members

1. Supisara Chuthathumpitak (@csupisara)
2. Sathira Kittisukmongkol (@nongjamie)