



MARMARA UNIVERSITY FACULTY OF ENGINEERING

CSE2062

Object Oriented Programming

Instructure : Şakir Bingöl

	Student ID Number	Name & Surname
1	150717052	Tahir Temizkan
2	150718003	Mehmet Temmuz Boyraz
3	150718021	Uygar Gündüz
4	150718039	Şerife Küçükköşker
5	150718050	Mehmet Karaca
6	150720842	Talha Yavçın

Pizza Shop:

Pizza Shop Order System

This project's aim in general is allowing customers to order pizza and their drinks easily. Best way to do this is creating a Java based GUI program. To achieve this we implemented 6 different classes. These classes are:

Selection Class

In this class we take care customers selections as we process the informations we got from the user and use them as we needed. This class is the superclass of the pizza classes and the Drink class.

```
package pizza_shop;
public class Selection {
    private String size;
    private double price;
    private int amount;

    public Selection(String size,int amount) {
        super();
        this.size = size;
        this.amount = amount;
        price = 0.0;
    }

    public String getSize() {
        return size;
    }
    public void setSize(String size) {
        this.size = size;
    }
    public double getPrice() {
        return price;
    }
    public void setPrice(double price) {
        this.price = price;
    }
    public int getAmount() {
        return amount;
    }
    public void setAmount(int amount) {
        this.amount = amount;
    }

    @Override
    public String toString() {
        return String.format("%d %s ",this.getAmount(),this.getSize());
    }
}
```

Pizza Classes(Pepperoni,Funghi,Margarita)

These classes are subclasses of the class “Selection”. In these classes we determine the price of the order and we ask if the user wants more cheese or not.

```
package pizza_shop;
import javax.swing.*;

public class Pepperoni extends Selection {
    private boolean cheese;

    public Pepperoni(String size,int amount,Main lbl) {
        super(size,amount);
        if(JOptionPane.showConfirmDialog(lbl, "Would you like add double cheese to your Pepperoni Pizza?","Cheese",JOptionPane.YES_NO_OPTION)==0) cheese=true;
        else cheese=false;
        double price;
        if(size.equals("Small")) price=50;
        else if(size.equals("Medium")) price=75;
        else price=100;
        if(cheese) price*=1.25;
        setPrice(price);
    }

    @Override
    public String toString() {
        if(cheese) return super.toString()+"Double Cheese Pepperoni Pizza(s)";
        else return super.toString()+"Pepperoni Pizza(s)";
    }
}
```

```
package pizza_shop;
import javax.swing.*;

public class Funghi extends Selection {
    private boolean cheese;

    public Funghi(String size,int amount,Main lbl) {
        super(size,amount);
        if(JOptionPane.showConfirmDialog(lbl, "Would you like add double cheese to your Funghi Pizza?","Cheese",JOptionPane.YES_NO_OPTION)==0) cheese=true;
        else cheese=false;
        double price;
        if(size.equals("Small")) price=50;
        else if(size.equals("Medium")) price=75;
        else price=100;
        if(cheese) price*=1.25;
        setPrice(price);
    }

    @Override
    public String toString() {
        if(cheese) return super.toString()+" Double Cheese Funghi Pizza(s)";
        else return super.toString()+" Funghi Pizza(s)";
    }
}
```

```
package pizza_shop;
import javax.swing.*;

public class Margarita extends Selection {
    private boolean cheese;

    public Margarita(String size,int amount,Main lbl) {
        super(size,amount);
        if(JOptionPane.showConfirmDialog(lbl, "Would you like add double cheese to your Margarita Pizza?","Cheese",JOptionPane.YES_NO_OPTION)==0) cheese=true;
        else cheese=false;
        double price;
        if(size.equals("Small")) price=50;
        else if(size.equals("Medium")) price=75;
        else price=100;
        if(cheese) price*=1.25;
        setPrice(price);
    }

    @Override
    public String toString() {
        if(cheese) return super.toString()+"Double Cheese Margarita Pizza(s)";
        else return super.toString()+"Margarita Pizza(s)";
    }
}
```

Drink Class

This class is a subclass of the class "Selection". In this class we determine the price of the order and we ask the user what type of drink they want.

```
package pizza_shop;
import javax.swing.*;

public class Drink extends Selection {
    private String drinko;
    String[] drinks = {"Water", "Fanta", "Pepsi"};

    public Drink(String size, int amount, Main lbl) {
        super(size, amount);
        try {
            drinko = (String) JOptionPane.showInputDialog(lbl, "Select a drink.", "Select a drink",
                JOptionPane.QUESTION_MESSAGE, null, drinks, drinks[0]);

            double price;
            if(size.equals("Small")) price=3;
            else if(size.equals("Medium")) price=6;
            else price=9.0;
            if(drinko.equals("Fanta")) price*=2;
            if(drinko.equals("Pepsi")) price*=2.5;
            setPrice(price);
        }
        catch(NullPointerException e) {
        }
    }

    @Override
    public String toString() {
        return super.toString()+drinko+"(s)";
    }
}
```

Main Class

In the main class we have four methods which are “Main”, “init”, “actionPerformed” and “main”. In the “Main” and “init” methods we simply create the GUI objects. In the “actionPerformed” method we analyze the entries of the user and response as necessary. And in “main” method we just run the “Main” method. We explained how to run the code in our video.

```
package pizza_shop;

import java.awt.*;
import java.awt.event.ActionEvent;
import java.awt.event.ActionListener;
import java.util.*;
import javax.swing.*;

public class Main extends JFrame implements ActionListener{
    int amount;
    private static final long serialVersionUID = 1L;
    private JLabel sizL,seleL,pielL,listL;
    private JComboBox<String> size;
    private JRadioButton margR,pepR,musR,driR;
    private ButtonGroup buttonS;
    private JTextField piecT;
    private JButton buttonA,buttonO;

    ArrayList<Selection> selectionList = new ArrayList<Selection>();

    public Main() {
        setLayout(null);
        setSize(600,400);
        setLocationRelativeTo(null);
        setTitle("Order");
        init();
        buttonA.addActionListener(this);
        buttonO.addActionListener(this);
        setVisible(true);
    }

    public void init() {
        sizL = new JLabel("Select size:");
        sizL.setSize(250, 50);
        sizL.setFont(new Font(Font.DIALOG, Font.BOLD, 15));
        sizL.setLocation(75, 10);
        add(sizL);

        String[] sizes = {"Small","Medium","Large"};
        size = new JComboBox<String>(sizes);
        size.setSelectedIndex(0);
        size.setSize(150, 25);
        size.setLocation(200, 25);
        add(size);

        seleL = new JLabel("Select what you want to order:");
        seleL.setSize(500, 50);
        seleL.setFont(new Font(Font.DIALOG, Font.BOLD, 15));
        seleL.setLocation(75, 55);
        add(seleL);

        buttonS = new ButtonGroup();

        margR = new JRadioButton("Margarita");
        margR.setSize(100, 50);
        margR.setLocation(80, 90);
        add(margR);

        pepR = new JRadioButton("Pepperoni");
        pepR.setSize(100, 50);
        pepR.setLocation(80, 130);
        add(pepR);

        musR = new JRadioButton("Funghi");
        musR.setSize(100, 50);
        musR.setLocation(200, 90);
        add(musR);

        driR = new JRadioButton("Drink");
        driR.setSize(100, 50);
        driR.setLocation(200, 130);
        add(driR);
    }
}
```

```

        buttonS.add(margR);
        buttonS.add(pepR);
        buttonS.add(musR);
        buttonS.add(driR);

        piecL = new JLabel("Type how many pieces you want to order:");
        piecL.setSize(500, 50);
        piecL.setFont(new Font(Font.DIALOG, Font.BOLD, 15));
        piecL.setLocation(75, 165);
        add(piecL);

        piecT = new JTextField();
        piecT.setSize(300, 25);
        piecT.setLocation(75, 210);
        add(piecT);

        buttonA = new JButton("Add");
        buttonA.setSize(120, 40);
        buttonA.setFont(new Font(Font.DIALOG, Font.BOLD, 16));
        buttonA.setLocation(75, 250);
        add(buttonA);

        buttonO = new JButton("Order");
        buttonO.setSize(120, 40);
        buttonO.setFont(new Font(Font.DIALOG, Font.BOLD, 16));
        buttonO.setLocation(280, 250);
        buttonO.setEnabled(false);
        add(buttonO);

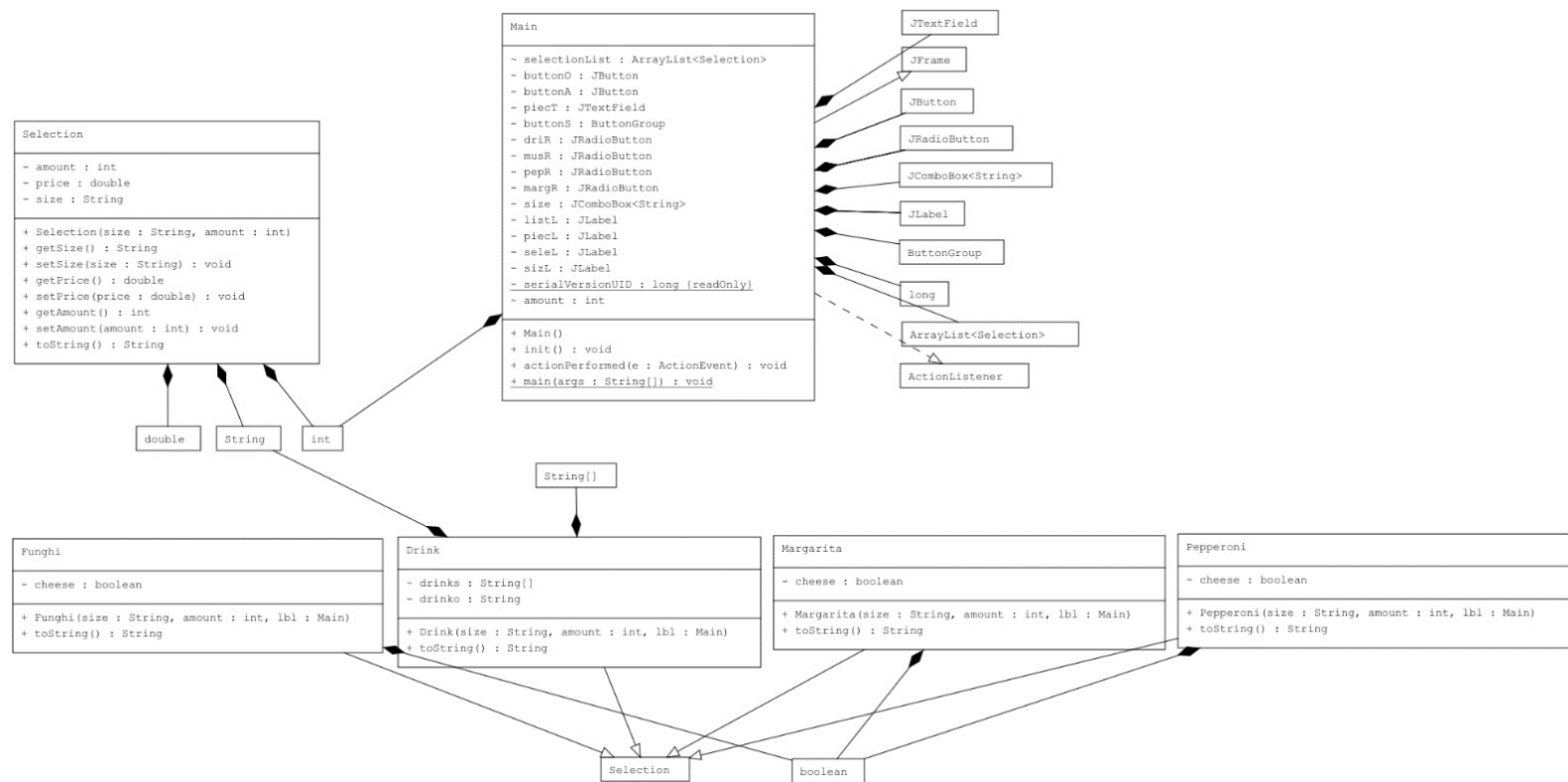
        listL = new JLabel();
        listL.setSize(500, 50);
        listL.setLocation(75, 290);
        add(listL);
    }

    @Override
    public void actionPerformed(ActionEvent e) {
        String sizer = (String)size.getSelectedItem();
        if(e.getSource().equals(buttonA)) {
            if( driR.isSelected() || pepR.isSelected() || musR.isSelected() || margR.isSelected() && !(piecT.getText().isEmpty()) ) {
                try {
                    amount = Integer.parseInt(piecT.getText().trim());
                    Selection ord;
                    if(driR.isSelected()) { ord = new Drink(sizer,amount,this); }
                    else if(margR.isSelected()) { ord = new Margarita(sizer,amount,this); }
                    else if(pepR.isSelected()) { ord = new Pepperoni(sizer,amount,this); }
                    else { ord = new Funghi(sizer,amount,this); }
                    piecT.setText(null);
                    selectionList.add(ord);
                    listL.setText(ord.toString()+" added");
                    buttonS.clearSelection();
                    buttonO.setEnabled(true);
                }
                catch(NumberFormatException e1) {
                    JOptionPane.showMessageDialog(this, "Enter an integer as amount");
                }
            }
            else { JOptionPane.showMessageDialog(this, "Select what you want to order and enter an amount");
            }
        }
        if(e.getSource().equals(buttonO)) {
            String report = "";
            double cost=0.0;
            for(int i=0;i<selectionList.size();i++) {
                Selection k = selectionList.get(i);
                report += k.toString();
                double tpoforder = k.getAmount() * k.getPrice();
                cost += tpoforder;
                report = report + " - "+tpoforder+" TL\n";
            }
            JOptionPane.showMessageDialog(this, report);
            JOptionPane.showMessageDialog(this, "You should pay "+cost+" TL");
            listL.setText(null);
            buttonO.setEnabled(false);
            selectionList.clear();
        }
    }

    public static void main(String[] args) {
        new Main();
    }
}

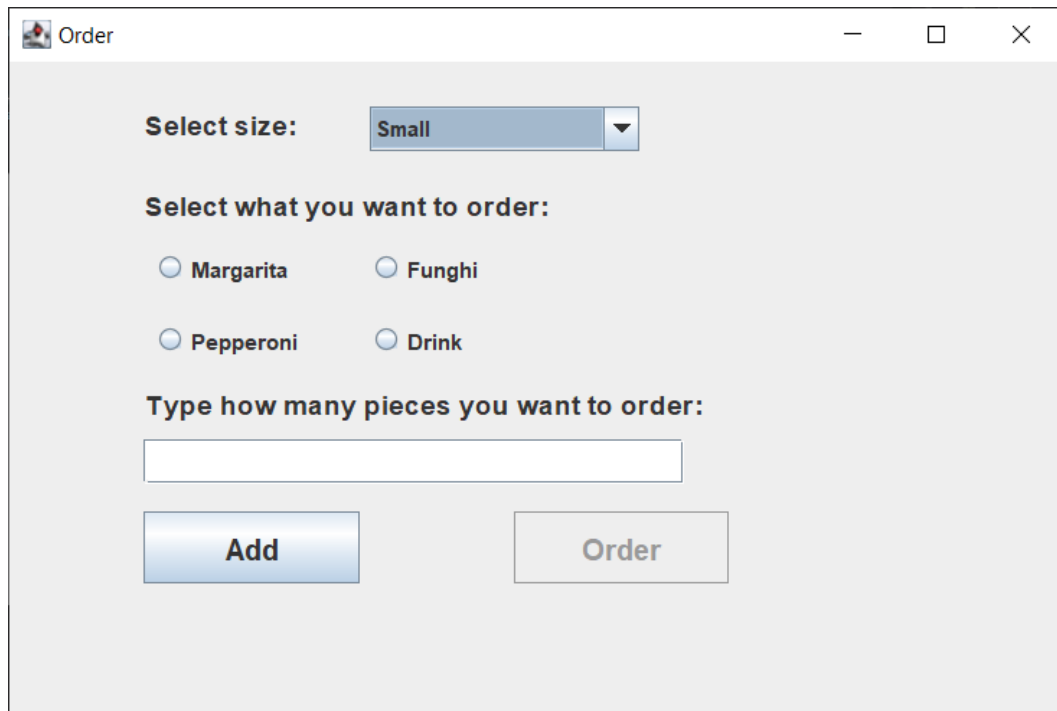
```

UML Diagram of Our Project



Outputs and Screens/Windows of Our Project

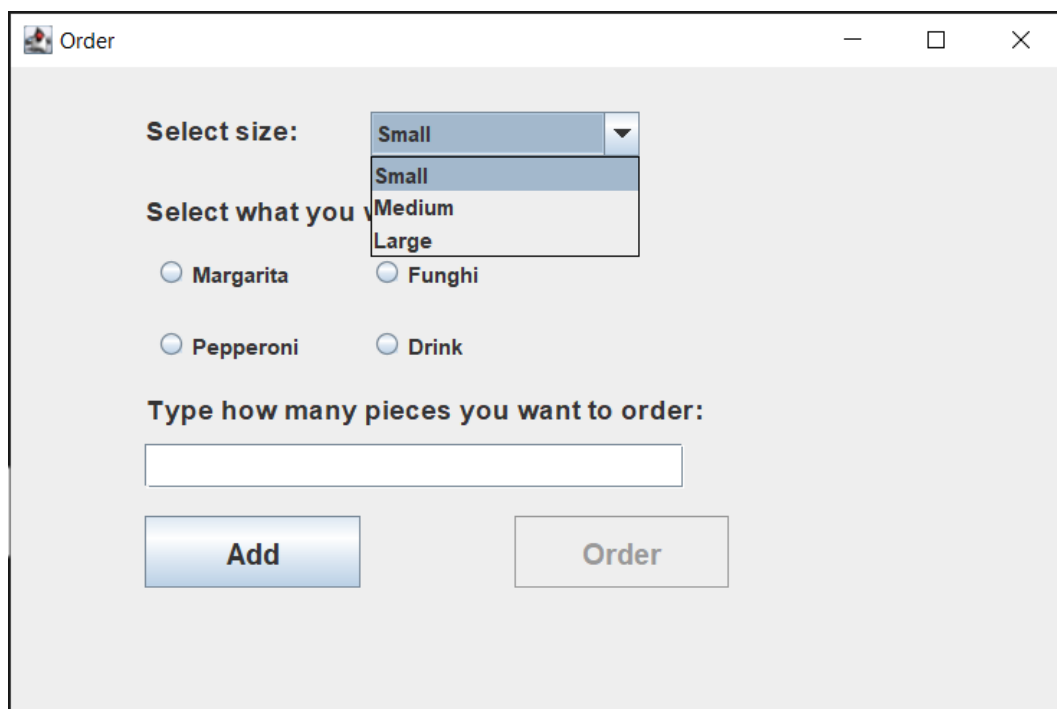
Main Screen



The screenshot shows a window titled "Order" with a standard Windows-style title bar (minimize, maximize, close buttons). The main content area has a light gray background. It contains the following elements:

- Select size:** A dropdown menu currently showing "Small".
- Select what you want to order:** Four radio buttons arranged in two rows:
 - Top row: ☐ Margarita, ☐ Funghi
 - Bottom row: ☐ Pepperoni, ☐ Drink
- Type how many pieces you want to order:** A text input field.
- Buttons:** Two buttons at the bottom: "Add" (blue gradient) and "Order" (gray gradient).

Size Selection Box



This screenshot is identical to the one above, but the "Select size:" dropdown menu is open, displaying a list of options: "Small", "Medium", and "Large". The "Small" option is currently selected and highlighted in blue. The rest of the interface remains the same.

Cheese Addition Screens

Cheese

?

Would you like add double cheese to your Margarita Pizza?

Yes

No

Cheese

?

Would you like add double cheese to your Funghi Pizza?

Yes

No

Cheese

?

Would you like add double cheese to your Pepperoni Pizza?

Yes

No

Drink Selection Screen

Select a drink

?

Select a drink.

Water

Water

Fanta

Pepsi

Error Message Screens

Order

Select size:

Select what you want to order:

☐ Margarita ☐ Funghi

☐ Pepperoni ☐ Drink

Type how many pieces you want to order:

Message

Select what you want to order and enter an amount

Order

Select size:

Select what you want to order:

☐ Margarita ☐ Funghi

☐ Pepperoni ☒ Drink

Type how many pieces you want to order:

Message

Enter an integer as amount

Order

Select size:

Select what you want to order:

☒ Margarita ☐ Funghi

☐ Pepperoni ☐ Drink

Type how many pieces you want to order:

Message

Select what you want to order and enter an amount

Selection Complete Screen

Order

Select size: **Medium**

Select what you want to order:

☐ Margarita ☐ Funghi

☐ Pepperoni ☒ Drink

Type how many pieces you want to order:

1

Add **Order**

1 Medium Water(s) added

Select a drink

Select a drink.

Water

OK **Cancel**

Order Summary Screen

Message

i 1 Small Double Cheese Margarita Pizza(s) - 62.5 TL
2 Medium Funghi Pizza(s) - 150.0 TL
1 Large Double Cheese Pepperoni Pizza(s) - 125.0 TL
3 Medium Fanta(s) - 36.0 TL
2 Small Water(s) - 6.0 TL

OK

Total Price Screen

Message

i **You should pay 379.5 TL**

OK