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Course Project Part 1 - Documentation

SUMMARY

In this project, I chose the first option of creating a program for a business. My program goal is to simulate ordering a pizza from a pizza shop, and setting an appointment for pick-up. In my program, I chose Woodstock's Pizza, a pizza place in Santa Barbara to be this pizza shop. The target audience of my program would be anyone who is hungry for pizza and is ordering one from home, work, or any location not in the pizza shop. Using swing elements, my program displays 4 pizza flavor options to the user in a new window. The user is to select their desired flavor and press the "order" button found on the right of the window. When this is done, a pseudo-receipt will be generated in the text box below the pizza flavor buttons. In this receipt, the user's chosen flavor is reiterated and an order number, order cost, order placed date, order pick-up date, and several special discounts are displayed. The strengths of my program include efficiency and simplicity. My program is very readable and hard to get lost in. I optimized my code where I could, trimming the fat from unnecessary lines of code. A weakness of my program would be the lack of further details about the order. There could be improvements to the monetary aspect of the program, where the user would be charged tax. Although my program uses swing elements, it would be relatively easy to add new items to the list of pizza flavors for future improvement. An interesting idea would be to add a dedicated menu area in the generated window that not only displays pizza flavors but toppings for the user to add to their selected pizza. This could be expanded further to include drinks, condiments, and dessert items. Overall, this program was a fun way to incorporate my introduction to Java. I especially loved using swing elements to create a new window with the information that I inserted into it.

PSEUDOCODE

In INTERFACE Pizza:

- Create getDescription() method

- Create getCost() method

In CLASS Pesto which inherits from INTERFACE Pizza:

- Set getDescription() to return "Pesto"

- Set getCost() to return 7.99

In CLASS Pepperoni which inherits from INTERFACE Pizza:

- Set getDescription() to return "Pepperoni"

- Set getCost() to return 9.99

In CLASS Sriracha which inherits from INTERFACE Pizza:

- Set getDescription() to return "Sriracha"

- Set getCost() to return 10.99

In CLASS Pesto which inherits from INTERFACE Pizza:

- Set getDescription() to return "Pineapple"

- Set getCost() to return 8.99

In CLASS PizzaShop which EXTENDS JFrame:

- Create JRadioButton pestoRB

- Create JRadioButton pepRB

- Create JRadioButton srirRB

- Create JRadioButton pineRB

- Create JTextArea orderTextArea

In PizzaShop constructor:

- Set title of window to "Woodstock's Pizza"

- Set pestoRB to "Pesto Pizza"

- Set pepRB to "Pepperoni Pizza"

- Set srirRB to "Sriracha Pizza"

- Set pineRB to "Pineapple Pizza"

- Create ButtonGroup pizzaGroup

- Create JButton orderButton

- Set orderTextArea equal to JTextArea with 15 rows and 40 column

In orderButton.addActionListener(e ->:

- Create dateFormat equal to SimpleDateFormat with MM//dd//yyyy and HH:mm:ss format

- Create dateFormat1 equal to SimpleDateFormat with MM//dd//yyyy format

- Create orderDate equal to dateFormat.format(date)

- Create orderDate1 equal to dateFormat1.format(date)

- Create pizza equal to null

- Create discount array to hold discounts on select menu items

- Create rand equal to new Random() for random number generation

- Create randnum equal to rand.nextInt(99)+1

- IF pestoRB.isSelected()

 - THEN pizza is equal to new Pesto()

- ELSE IF pepRB.isSelected()

```
        THEN pizza is equal to new Pepperoni()
ELSE IF srirRB.isSelected()
    THEN pizza is equal to new Sriracha()
ELSE IF pineRB.isSelected()
    THEN pizza is equal to new Pineapple()
ENDIF
```

When the user selects their pizza and presses the order button, the result is determined by the below pseudocode.

```
SWITCH Objects.requireNonNull(pizza).getDescription()
    CASE "Pesto" OUTPUT "You have ordered a Pesto pizza."
    CASE "Pepperoni" OUTPUT "You have ordered a Pepperoni pizza."
    CASE "Sriracha" OUTPUT "You have ordered a Sriracha pizza."
    CASE "Pineapple" OUTPUT "You have ordered a Pineapple pizza."
    DEFAULT OUTPUT "Unexpected value"
```

```
ENDSWITCH
```

```
OUTPUT order number
```

```
OUTPUT cost of order
```

```
OUTPUT when order placed
```

```
OUTPUT when to pick up order
```

```
OUTPUT Valentine's Day specials message
```

```
OUTPUT elements from discount array
```

```
OUTPUT closing message
```

Set size of window to a width of 600 and height of 500

setVisible

In MAIN

```
Create new Pizzashop()
```