

1.0 The purpose of this program is to create a café program that sells beverages and keeps track of the purchases and return a total amount

1.1 MenuProject Version 1: This system will take an order from a customer, get the size and number of drinks and return a price. This software is stand-alone in that it does not need any other software to operate. The software runs on Java Version: 1.8.0_161; with Java Runtime: Java (TM) SE Runtime Environment 1.8.0_161-b12.

1.2 This software is for a basic menu for a restaurant or café. It is meant to serve the needs of a small food business with a small menu size.

1.3 This document covers the requirements, design, and testing outcomes of this software.

2.0 Requirements

2.1 This program shall get input from the user taking an order.

2.2 It shall check to make sure that the menu option chosen is valid and get the price and quantity of the chosen menu size

2.3 This program shall return a price amount that will be added onto an overall total variable when the exit condition is met.

3.0 Design

3.1 Initialize a while loop with an exit condition that will continually display a menu of items that can be chosen by the user.

3.2 Get a valid option from the user and enter the choice into a switch case of the menu items

3.3 If a choice is valid in the switch display what option was chosen and get the menu size and store the option in a string variable

3.4 Create a function to return a price.

- a. Pass both the choice and size into the function
- b. Initializes a switch case that takes the choice option as the case
- c. Each switch contains the appropriate pricing for each size of the chosen menu option
- d. If the switch choice is valid check what size the customer wanted
 - i. Size can be read as a single letter or the word spelled out by ignoring the case

- e. Next get the quantity of the size
- f. Calculate the price by getting the product of the quantity and the single price
- g. Return the calculated price

3.5 Add the returned price into a total variable that will continue to accept the price as long as the exit condition is not meet.

3.6 Once the exit condition is meet, display the total price and an exit message.

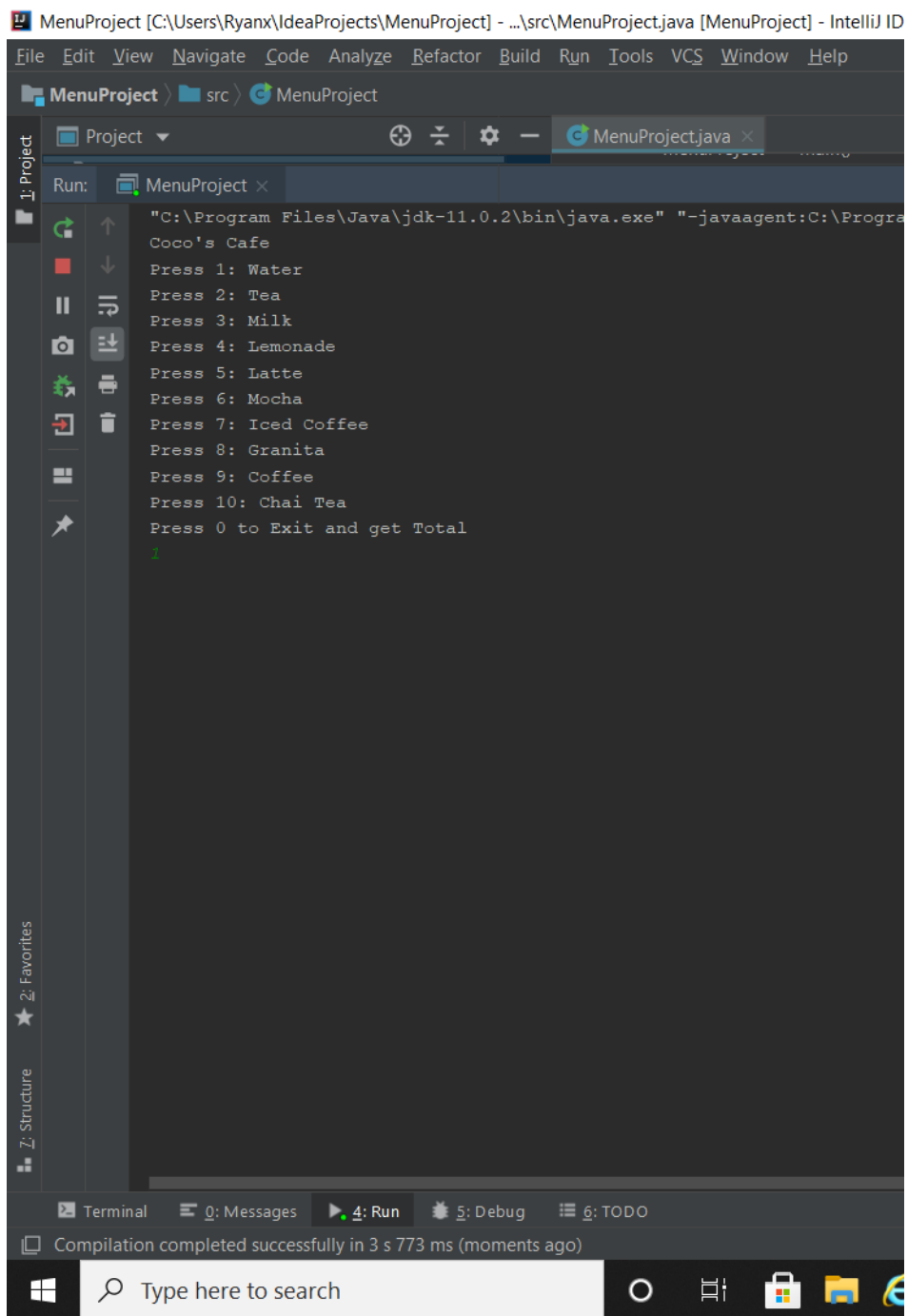
4.0 Test

4.1 Plan:

- a. Run program and test whether the menu displays correctly
- b. When making an initial menu selection check that the choice is a valid input between 1 and 10
 - i. Give an error message for invalid input and repeat prompt for input
- c. If menu selection is valid, give a valid drink size
 - i. Give an error message for invalid drink size and repeat prompt for input
- d. Give the quantity of the drinks and make sure the input is a number value
 - i. Give error message if input is invalid and repeat prompt for input
- e. Make sure the program returns some value back to main
- f. Make sure the calculation is correct
- g. Make sure the exit condition can be meet and the proper information displays

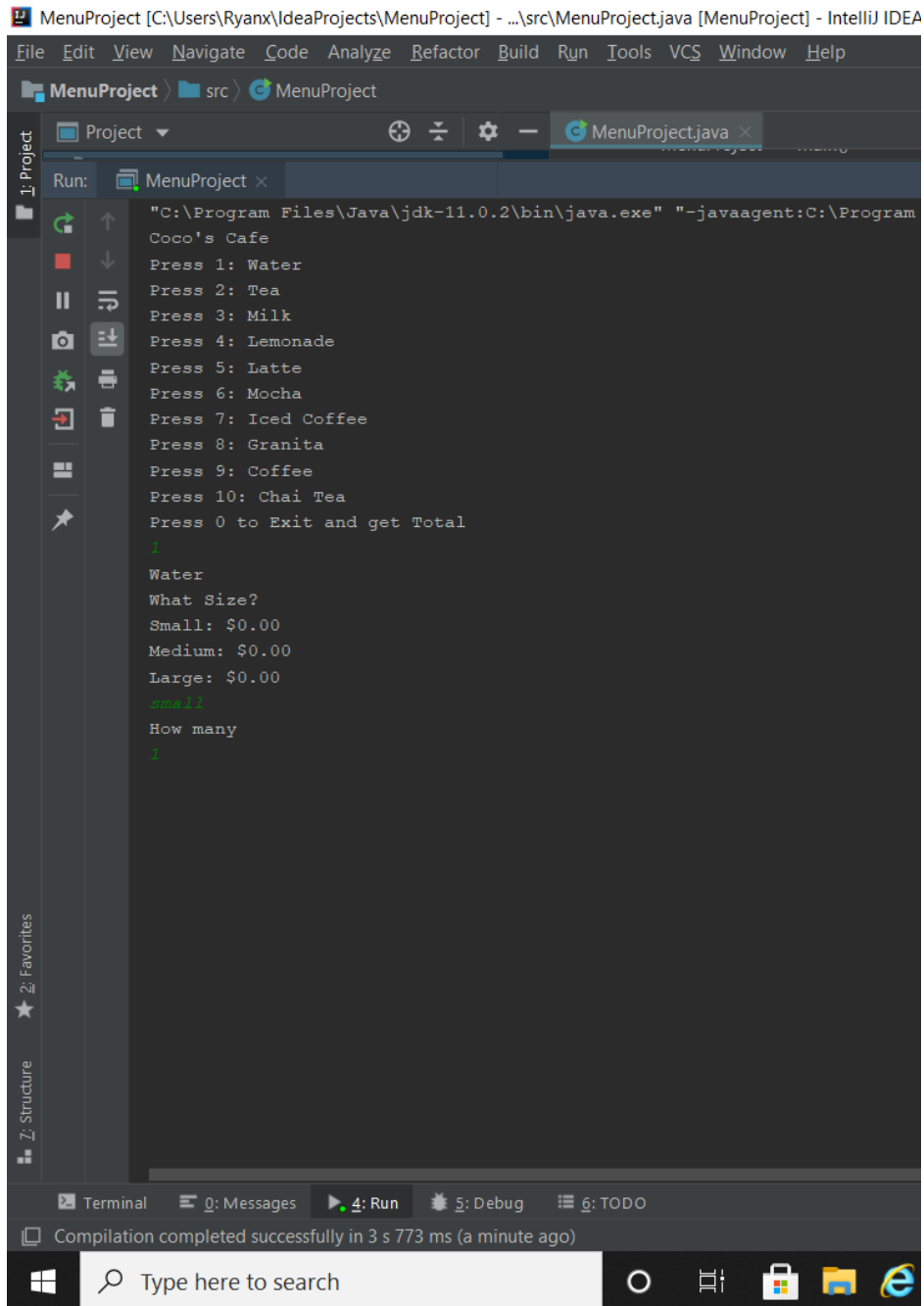
4.2 Results: This program performs as planned with the final output being the total amount due. Error messages occur if the input is incorrect and will re-prompt the user to give valid input. Improvements to this software could be the addition of payment options for the customer. There could be the addition of other food or drink options that could be modified per the customers request.

Appendix



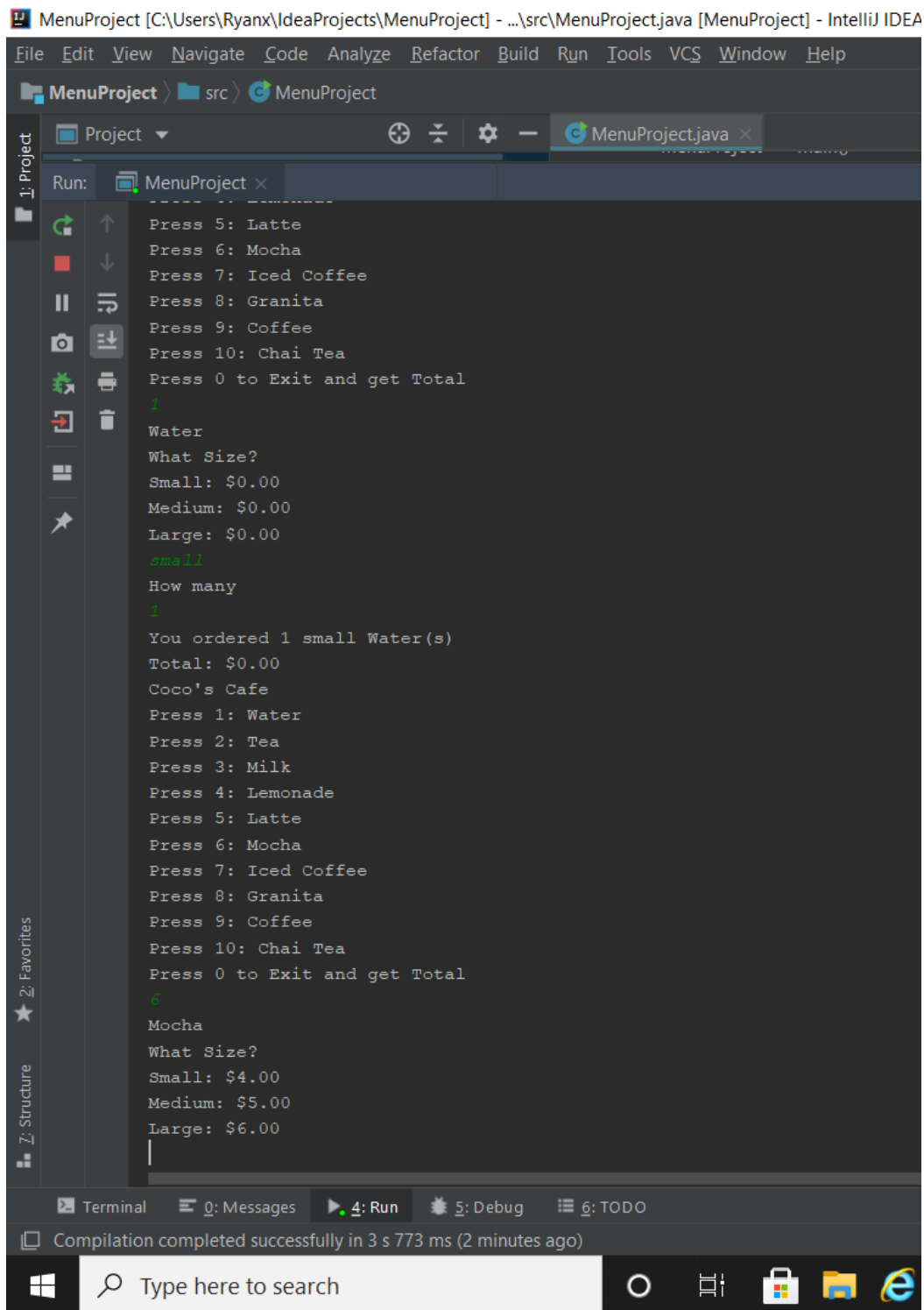
The screenshot shows the IntelliJ IDEA IDE interface. The top menu bar includes File, Edit, View, Navigate, Code, Analyze, Refactor, Build, Run, Tools, VCS, Window, and Help. The project structure on the left shows 'MenuProject' with a 'src' folder containing 'MenuProject.java'. The main editor window displays the Java code for 'MenuProject.java'. The Run tab is active, showing the command: `"C:\Program Files\Java\jdk-11.0.2\bin\java.exe" "-javaagent:C:\Progra`. The output of the program is displayed in the Run console, showing a menu for 'Coco's Cafe' with options 1 through 10, and a prompt to press 0 to exit and get the total. The status bar at the bottom indicates 'Compilation completed successfully in 3 s 773 ms (moments ago)'. The Windows taskbar is visible at the bottom of the screen.

```
MenuProject [C:\Users\Ryanx\IdeaProjects\MenuProject] - ...src\MenuProject.java [MenuProject] - IntelliJ ID
File Edit View Navigate Code Analyze Refactor Build Run Tools VCS Window Help
MenuProject > src > MenuProject
Project
Run: MenuProject x
"C:\Program Files\Java\jdk-11.0.2\bin\java.exe" "-javaagent:C:\Progra
Coco's Cafe
Press 1: Water
Press 2: Tea
Press 3: Milk
Press 4: Lemonade
Press 5: Latte
Press 6: Mocha
Press 7: Iced Coffee
Press 8: Granita
Press 9: Coffee
Press 10: Chai Tea
Press 0 to Exit and get Total
j
Terminal 0: Messages 4: Run 5: Debug 6: TODO
Compilation completed successfully in 3 s 773 ms (moments ago)
Type here to search
```



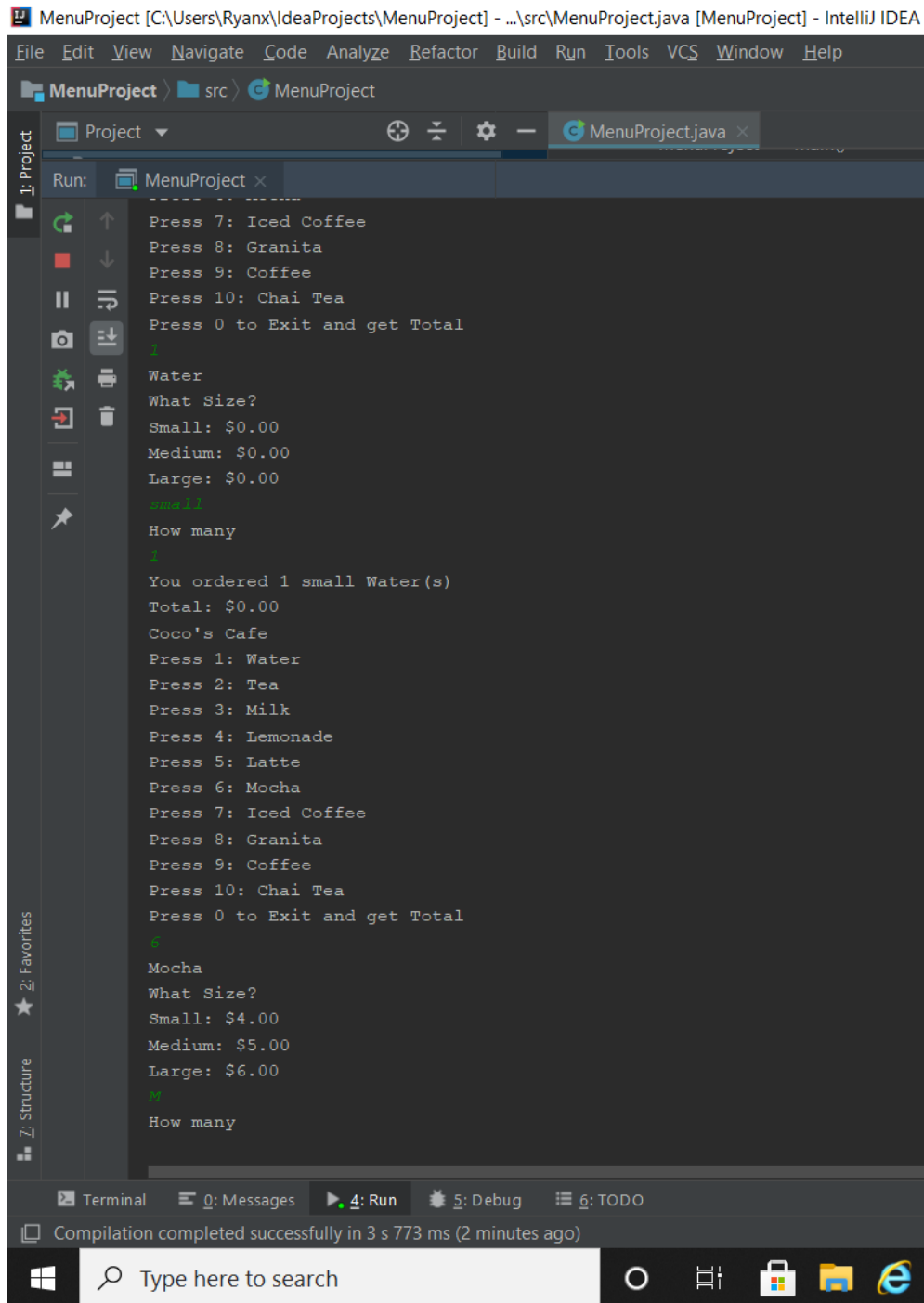
The screenshot shows the IntelliJ IDEA IDE with the 'MenuProject' open. The 'Run' tab is active, displaying the output of the Java application. The application is a menu system for 'Coco's Cafe' that lists 10 items and their prices, prompts the user for a size and quantity, and calculates the total. The user has entered 'small' for the size and '1' for the quantity. The IDE interface includes a menu bar, a toolbar, a project view on the left, and a status bar at the bottom.

```
MenuProject [C:\Users\Ryanx\IdeaProjects\MenuProject] - ...src\MenuProject.java [MenuProject] - IntelliJ IDEA
File Edit View Navigate Code Analyze Refactor Build Run Tools VCS Window Help
MenuProject > src > MenuProject
Project
Run: MenuProject x
"C:\Program Files\Java\jdk-11.0.2\bin\java.exe" "-javaagent:C:\Program
Coco's Cafe
Press 1: Water
Press 2: Tea
Press 3: Milk
Press 4: Lemonade
Press 5: Latte
Press 6: Mocha
Press 7: Iced Coffee
Press 8: Granita
Press 9: Coffee
Press 10: Chai Tea
Press 0 to Exit and get Total
1
Water
What Size?
Small: $0.00
Medium: $0.00
Large: $0.00
small
How many
1
Terminal 0: Messages 4: Run 5: Debug 6: TODO
Compilation completed successfully in 3 s 773 ms (a minute ago)
```



The screenshot shows the IntelliJ IDEA IDE with the MenuProject.java file open. The Run console displays the program's output, which is a menu-driven application for ordering drinks. The user has entered 'small' for the size and '1' for the quantity, resulting in a total of \$0.00. The program then prompts the user to enter a drink name, and the user has entered 'Mocha'.

```
MenuProject [C:\Users\Ryann\IdeaProjects\MenuProject] - ...src\MenuProject.java [MenuProject] - IntelliJ IDEA
File Edit View Navigate Code Analyze Refactor Build Run Tools VCS Window Help
MenuProject > src > MenuProject
Run: MenuProject x
Press 5: Latte
Press 6: Mocha
Press 7: Iced Coffee
Press 8: Granita
Press 9: Coffee
Press 10: Chai Tea
Press 0 to Exit and get Total
1
Water
What Size?
Small: $0.00
Medium: $0.00
Large: $0.00
small
How many
1
You ordered 1 small Water(s)
Total: $0.00
Coco's Cafe
Press 1: Water
Press 2: Tea
Press 3: Milk
Press 4: Lemonade
Press 5: Latte
Press 6: Mocha
Press 7: Iced Coffee
Press 8: Granita
Press 9: Coffee
Press 10: Chai Tea
Press 0 to Exit and get Total
6
Mocha
What Size?
Small: $4.00
Medium: $5.00
Large: $6.00
|
Terminal 0: Messages 4: Run 5: Debug 6: TODO
Compilation completed successfully in 3 s 773 ms (2 minutes ago)
Type here to search
```



MenuProject [C:\Users\Ryanx\IdeaProjects\MenuProject] - ...src\MenuProject.java [MenuProject] - IntelliJ IDEA

File Edit View Navigate Code Analyze Refactor Build Run Tools VCS Window Help

MenuProject src MenuProject

Project MenuProject.java

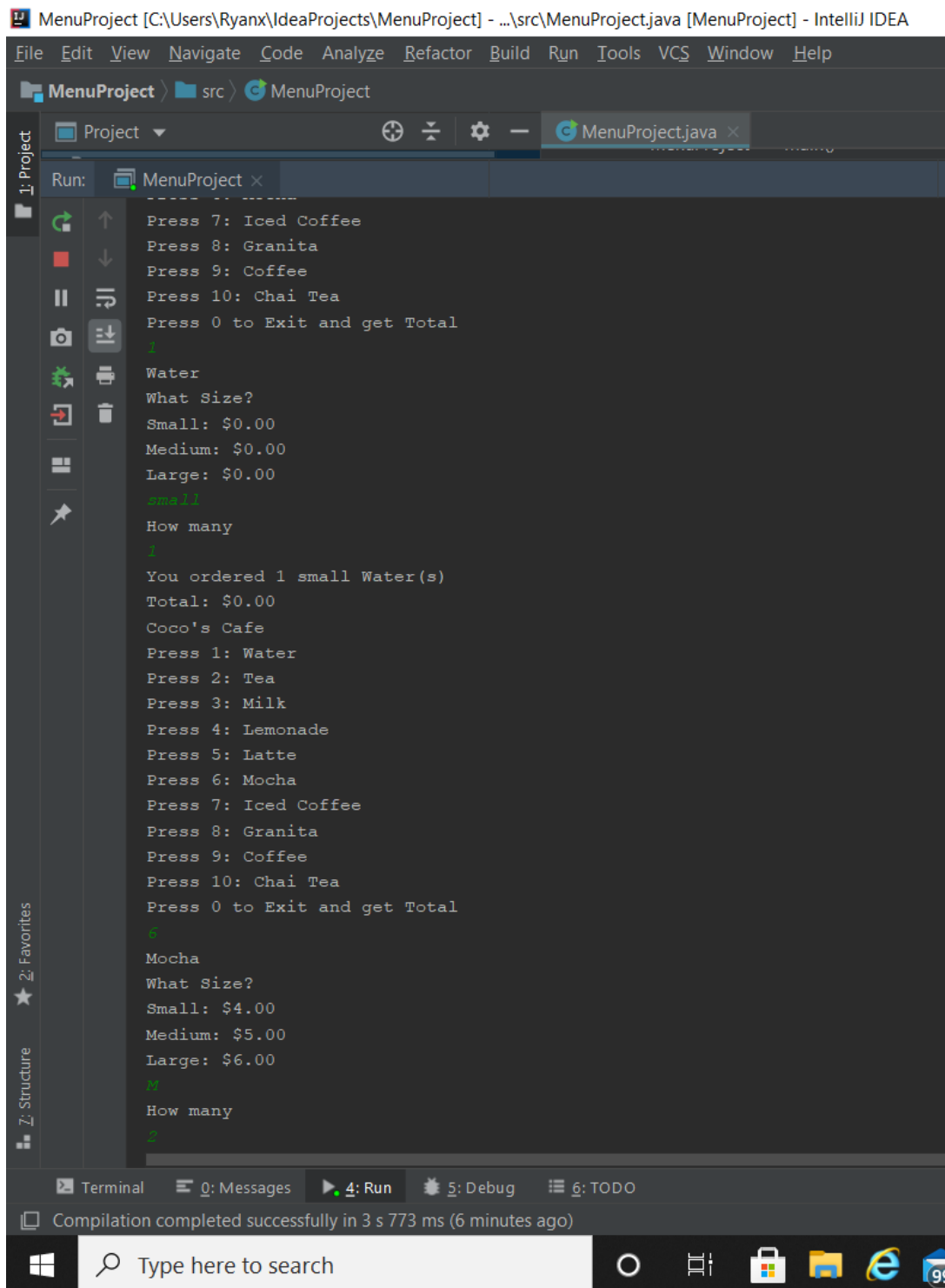
Run: MenuProject x

```
Press 7: Iced Coffee
Press 8: Granita
Press 9: Coffee
Press 10: Chai Tea
Press 0 to Exit and get Total
1
Water
What Size?
Small: $0.00
Medium: $0.00
Large: $0.00
small
How many
1
You ordered 1 small Water(s)
Total: $0.00
Coco's Cafe
Press 1: Water
Press 2: Tea
Press 3: Milk
Press 4: Lemonade
Press 5: Latte
Press 6: Mocha
Press 7: Iced Coffee
Press 8: Granita
Press 9: Coffee
Press 10: Chai Tea
Press 0 to Exit and get Total
6
Mocha
What Size?
Small: $4.00
Medium: $5.00
Large: $6.00
4
How many
```

Terminal 0: Messages 4: Run 5: Debug 6: TODO

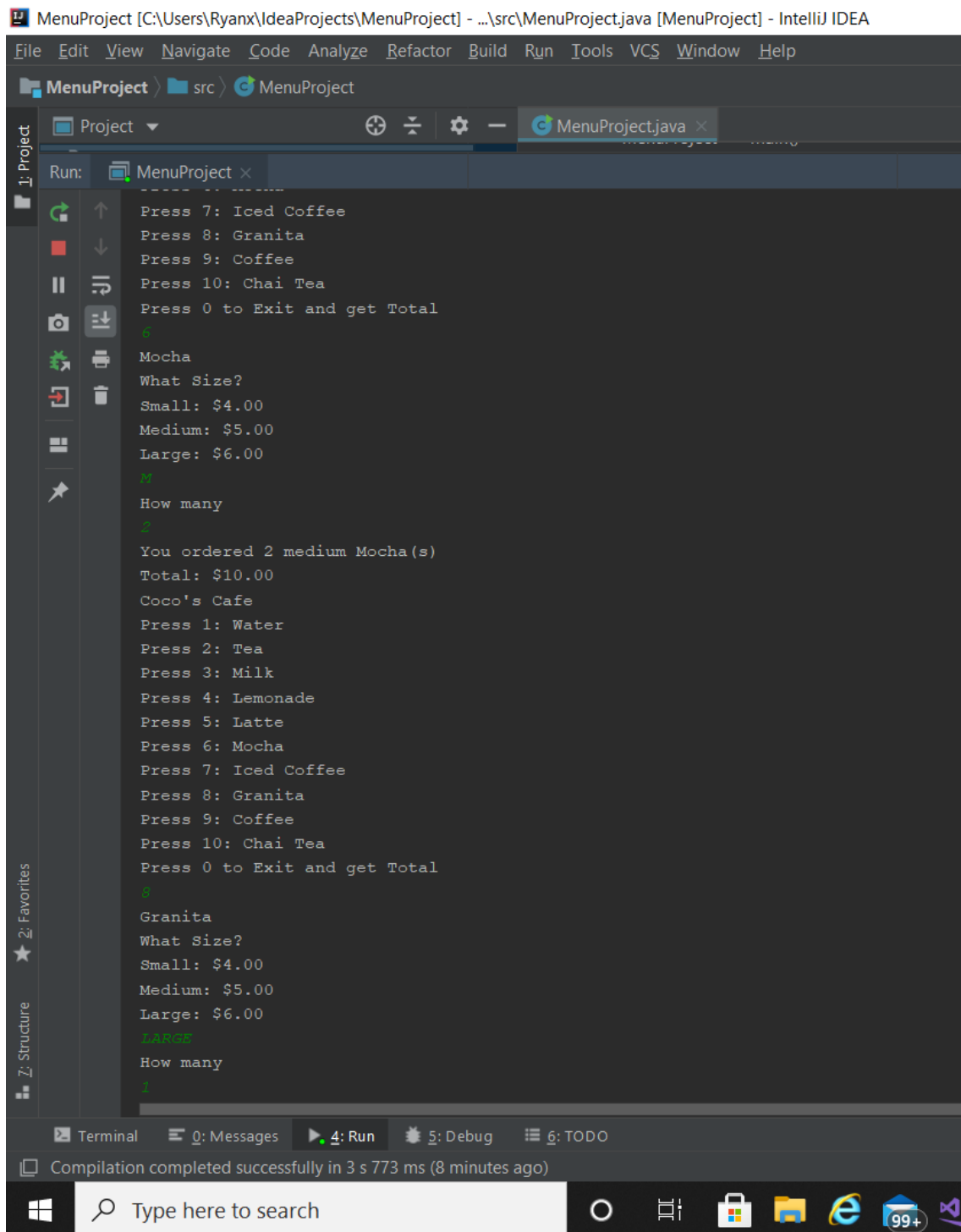
Compilation completed successfully in 3 s 773 ms (2 minutes ago)

Type here to search



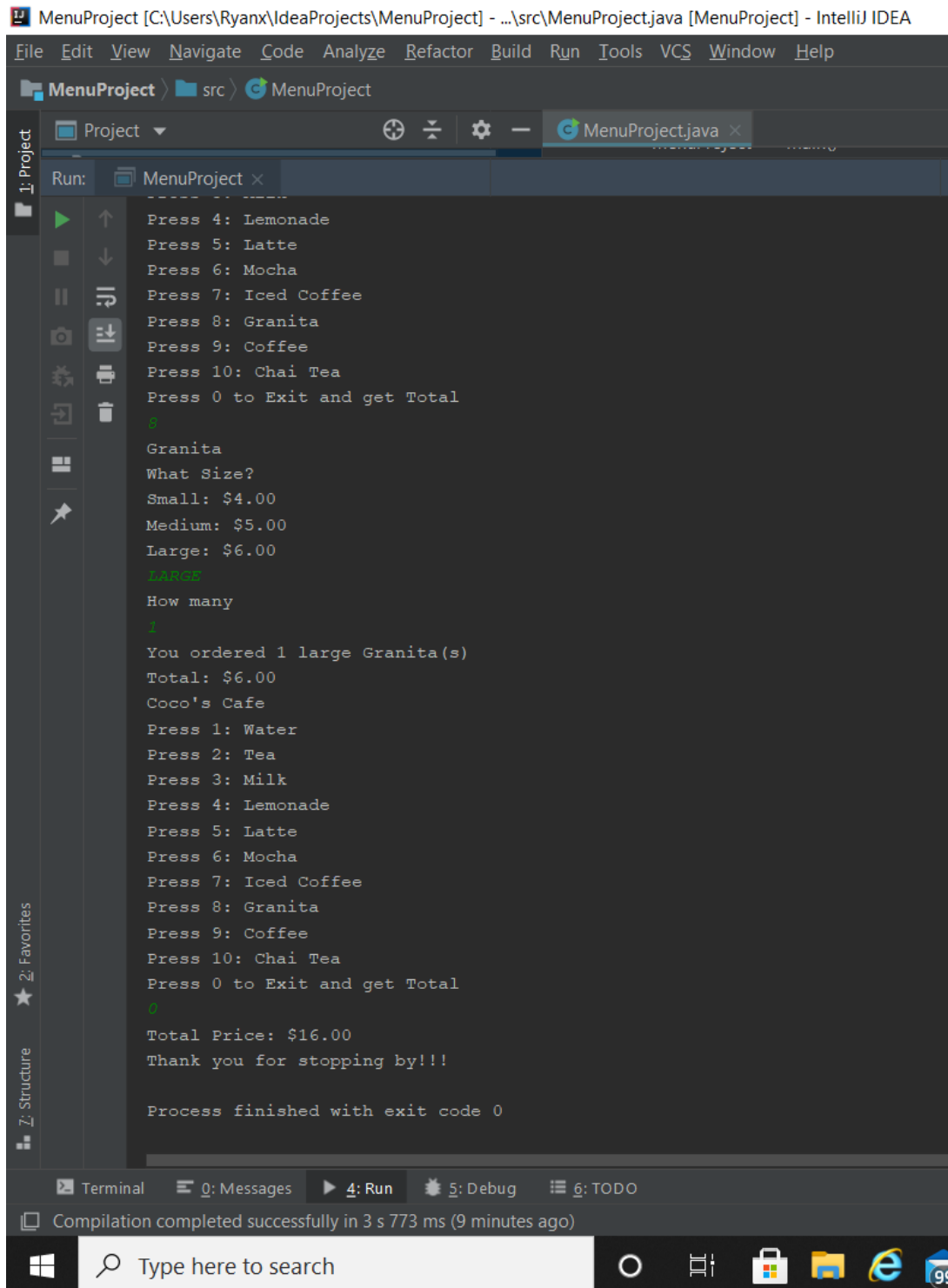
The screenshot shows the IntelliJ IDEA IDE with a project named 'MenuProject'. The main window displays the output of a Java program. The program prompts the user to press a number (0-10) to select an item or 0 to exit. The user has entered '1' for 'Water' and 'small'. The program then prompts for the quantity, and the user has entered '1'. The output shows the order summary: 'You ordered 1 small Water(s)' and 'Total: \$0.00'. The program then displays the menu again, and the user has entered '6' for 'Mocha' and 'What Size?'. The program then prompts for the quantity, and the user has entered '2'.

```
MenuProject [C:\Users\Ryanx\IdeaProjects\MenuProject] - ...src\MenuProject.java [MenuProject] - IntelliJ IDEA
File Edit View Navigate Code Analyze Refactor Build Run Tools VCS Window Help
MenuProject > src > MenuProject
Run: MenuProject x
Press 7: Iced Coffee
Press 8: Granita
Press 9: Coffee
Press 10: Chai Tea
Press 0 to Exit and get Total
1
Water
What Size?
Small: $0.00
Medium: $0.00
Large: $0.00
small
How many
1
You ordered 1 small Water(s)
Total: $0.00
Coco's Cafe
Press 1: Water
Press 2: Tea
Press 3: Milk
Press 4: Lemonade
Press 5: Latte
Press 6: Mocha
Press 7: Iced Coffee
Press 8: Granita
Press 9: Coffee
Press 10: Chai Tea
Press 0 to Exit and get Total
6
Mocha
What Size?
Small: $4.00
Medium: $5.00
Large: $6.00
M
How many
2
Terminal 0: Messages 4: Run 5: Debug 6: TODO
Compilation completed successfully in 3 s 773 ms (6 minutes ago)
Type here to search
```



The screenshot shows the IntelliJ IDEA IDE with a project named 'MenuProject'. The main editor displays the output of a Java program. The program prompts the user to select an item from a menu (1-10) and then a size (Small, Medium, Large). It calculates the total cost and displays the order summary. The program is run successfully, and the output is visible in the Run tab.

```
MenuProject [C:\Users\Ryanx\IdeaProjects\MenuProject] - ...src\MenuProject.java [MenuProject] - IntelliJ IDEA
File Edit View Navigate Code Analyze Refactor Build Run Tools VCS Window Help
MenuProject > src > MenuProject
Run: MenuProject x
Press 7: Iced Coffee
Press 8: Granita
Press 9: Coffee
Press 10: Chai Tea
Press 0 to Exit and get Total
6
Mocha
What Size?
Small: $4.00
Medium: $5.00
Large: $6.00
M
2
You ordered 2 medium Mocha(s)
Total: $10.00
Coco's Cafe
Press 1: Water
Press 2: Tea
Press 3: Milk
Press 4: Lemonade
Press 5: Latte
Press 6: Mocha
Press 7: Iced Coffee
Press 8: Granita
Press 9: Coffee
Press 10: Chai Tea
Press 0 to Exit and get Total
8
Granita
What Size?
Small: $4.00
Medium: $5.00
Large: $6.00
LARGE
How many
1
Terminal 0: Messages 4: Run 5: Debug 6: TODO
Compilation completed successfully in 3 s 773 ms (8 minutes ago)
Type here to search
```

MenuProject [C:\Users\Ryan\IdeaProjects\MenuProject] - ...src\MenuProject.java [MenuProject] - IntelliJ IDEA

File Edit View Navigate Code Analyze Refactor Build Run Tools VCS Window Help

MenuProject > src > MenuProject

Run: MenuProject x

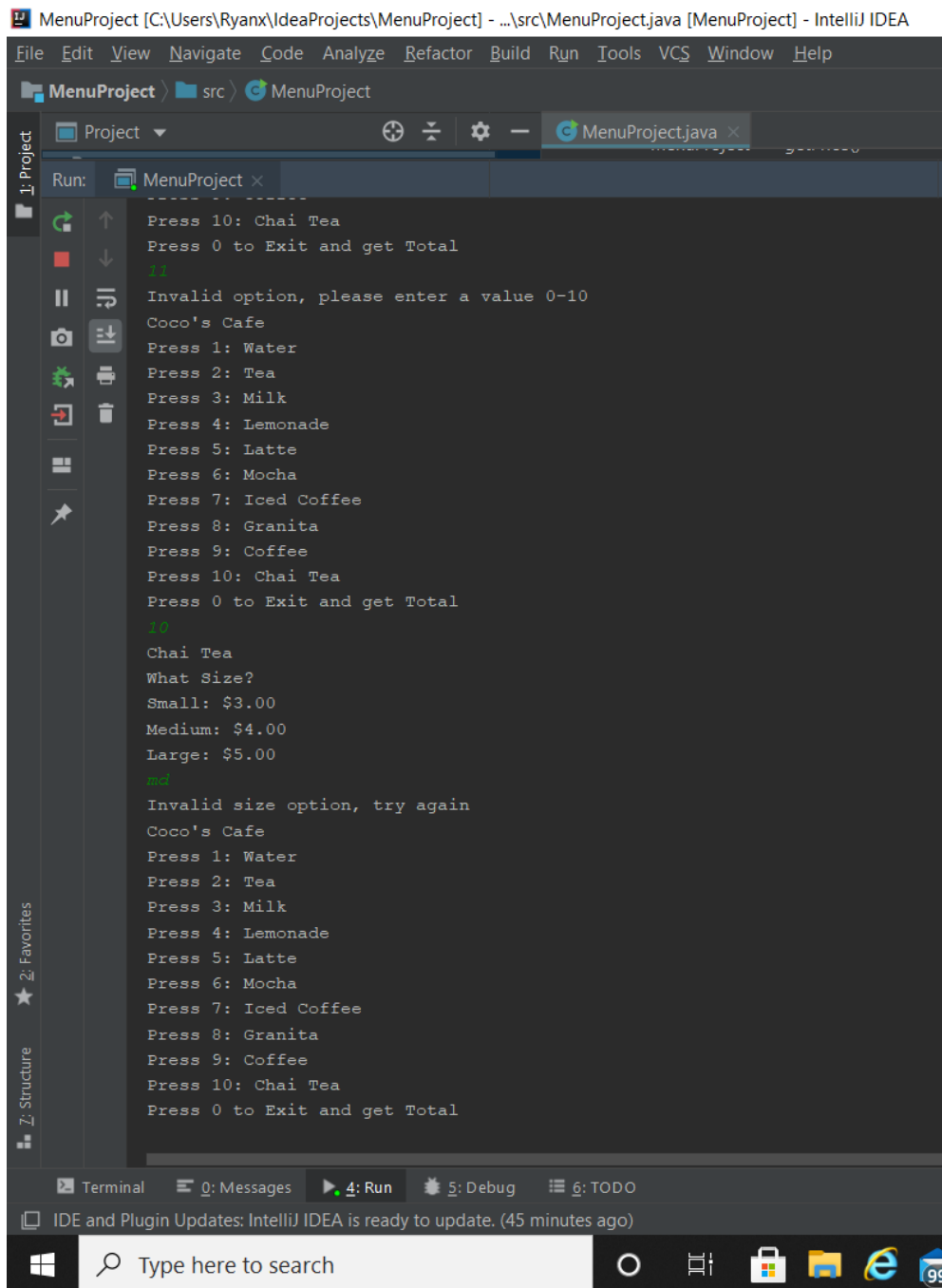
```
Press 4: Lemonade
Press 5: Latte
Press 6: Mocha
Press 7: Iced Coffee
Press 8: Granita
Press 9: Coffee
Press 10: Chai Tea
Press 0 to Exit and get Total
8
Granita
What Size?
Small: $4.00
Medium: $5.00
Large: $6.00
LARGE
How many
1
You ordered 1 large Granita(s)
Total: $6.00
Coco's Cafe
Press 1: Water
Press 2: Tea
Press 3: Milk
Press 4: Lemonade
Press 5: Latte
Press 6: Mocha
Press 7: Iced Coffee
Press 8: Granita
Press 9: Coffee
Press 10: Chai Tea
Press 0 to Exit and get Total
0
Total Price: $16.00
Thank you for stopping by!!!

Process finished with exit code 0
```

Terminal 0: Messages 4: Run 5: Debug 6: TODO

Compilation completed successfully in 3 s 773 ms (9 minutes ago)

Type here to search



The screenshot shows the IntelliJ IDEA IDE with the 'MenuProject' project open. The 'Run' tab is active, displaying the output of the Java application. The application is a menu-driven program for 'Coco's Cafe' that allows users to select a drink and its size. The output shows two successful transactions and one invalid size option error.

```
MenuProject [C:\Users\Ryanx\IdeaProjects\MenuProject] - ...src\MenuProject.java [MenuProject] - IntelliJ IDEA
File Edit View Navigate Code Analyze Refactor Build Run Tools VCS Window Help

MenuProject > src > MenuProject

Run: MenuProject x
Press 10: Chai Tea
Press 0 to Exit and get Total
10
Invalid option, please enter a value 0-10
Coco's Cafe
Press 1: Water
Press 2: Tea
Press 3: Milk
Press 4: Lemonade
Press 5: Latte
Press 6: Mocha
Press 7: Iced Coffee
Press 8: Granita
Press 9: Coffee
Press 10: Chai Tea
Press 0 to Exit and get Total
10
Chai Tea
What Size?
Small: $3.00
Medium: $4.00
Large: $5.00
and
Invalid size option, try again
Coco's Cafe
Press 1: Water
Press 2: Tea
Press 3: Milk
Press 4: Lemonade
Press 5: Latte
Press 6: Mocha
Press 7: Iced Coffee
Press 8: Granita
Press 9: Coffee
Press 10: Chai Tea
Press 0 to Exit and get Total
```

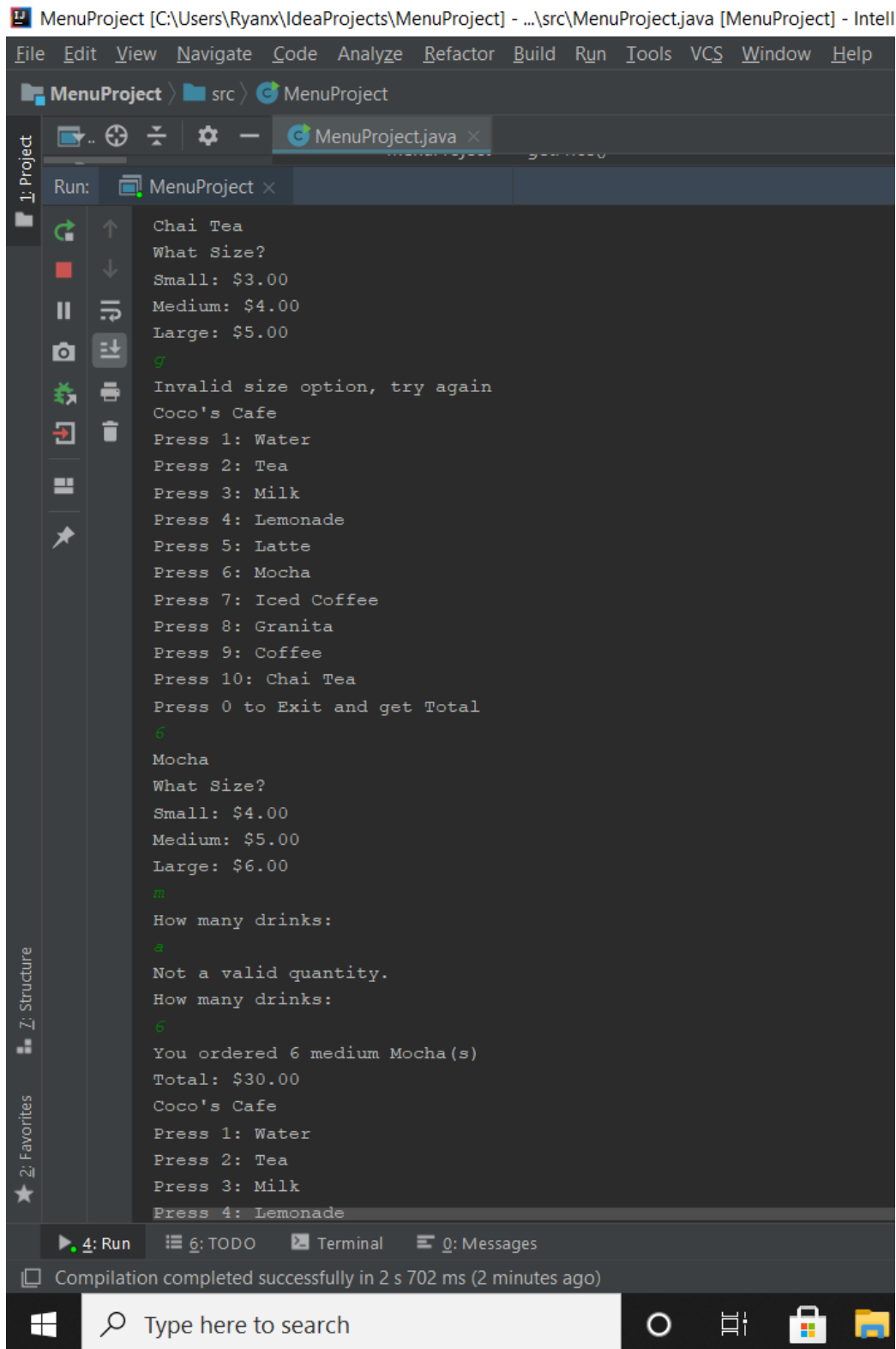
Terminal 0: Messages 4: Run 5: Debug 6: TODO
IDE and Plugin Updates: IntelliJ IDEA is ready to update. (45 minutes ago)

Type here to search



```
MenuProject [C:\Users\Ryann\IdeaProjects\MenuProject] - ...src\MenuProject.java [MenuProject] - Intel  
File Edit View Navigate Code Analyze Refactor Build Run Tools VCS Window Help  
MenuProject > src > MenuProject  
MenuProject.java x  
Run: MenuProject x  
"C:\Program Files\Java\jdk-11.0.2\bin\java.exe" "-javaagent:C:\Pr  
Coco's Cafe  
Press 1: Water  
Press 2: Tea  
Press 3: Milk  
Press 4: Lemonade  
Press 5: Latte  
Press 6: Mocha  
Press 7: Iced Coffee  
Press 8: Granita  
Press 9: Coffee  
Press 10: Chai Tea  
Press 0 to Exit and get Total  
12  
Invalid option, please enter a value 0-10  
Coco's Cafe  
Press 1: Water  
Press 2: Tea  
Press 3: Milk  
Press 4: Lemonade  
Press 5: Latte  
Press 6: Mocha  
Press 7: Iced Coffee  
Press 8: Granita  
Press 9: Coffee  
Press 10: Chai Tea  
Press 0 to Exit and get Total  
10  
Chai Tea  
What Size?  
Small: $3.00  
Medium: $4.00  
Large: $5.00  
Invalid size option, try again  
Coco's Cafe  
Press 1: Water  
Press 2: Tea
```

4: Run 6: TODO Terminal 0: Messages
Compilation completed successfully in 2 s 702 ms (a minute ago)



MenuProject [C:\Users\Ryanx\IdeaProjects\MenuProject] - ...src\MenuProject.java [MenuProject] - IntelliJ

File Edit View Navigate Code Analyze Refactor Build Run Tools VCS Window Help

MenuProject > src > MenuProject

Run: MenuProject x

```
Chai Tea
What Size?
Small: $3.00
Medium: $4.00
Large: $5.00
Invalid size option, try again
Coco's Cafe
Press 1: Water
Press 2: Tea
Press 3: Milk
Press 4: Lemonade
Press 5: Latte
Press 6: Mocha
Press 7: Iced Coffee
Press 8: Granita
Press 9: Coffee
Press 10: Chai Tea
Press 0 to Exit and get Total
6
Mocha
What Size?
Small: $4.00
Medium: $5.00
Large: $6.00
How many drinks:
Not a valid quantity.
How many drinks:
You ordered 6 medium Mocha(s)
Total: $30.00
Coco's Cafe
Press 1: Water
Press 2: Tea
Press 3: Milk
Press 4: Lemonade
```

4: Run 6: TODO Terminal 0: Messages

Compilation completed successfully in 2 s 702 ms (2 minutes ago)

Type here to search