

CS 1101 – Introduction to Computer Science
Spring 2023
Comprehensive Lab 1
UTEP Eats



Due Date Details:

Check-In: Check-in must be done by **February 27th, 2023**.

Java Program: Java program is due by **March 12th, 2023**.

Demo the Code: You will receive a link to demo to a designated Instructional Team member. You may only demo once you've turned in the program.

Objective: Students will be able to use their problem-solving skills by implementing, variable declaration, conditional statements, loops, file reading, and user input.

Background:

Your program will allow the user to select from a list of available foods to either pick up or have delivered to their address. The user will be able to do the following:

1. Add a food.
2. View order
3. Clear order
4. Checkout
5. Exit UTEP Eats

Important: Before you get started, read this entire document. If anything is unclear, do not hesitate to come to your instructor, TA, or IAs for help or clarification. We will be happy to help you.

Your program should have the following features:

1. Your program will read from a given text file that holds all available food choices and prices. Your file ("food.txt") will be formatted as such:
Food Price
2. Using a loop, create a menu to handle the following:
 1. **Add food**
 - . A list of available food will be displayed to the user with their pickup and delivery prices.
 - . Ask the user to enter the name of the food (chosen food).
 - . Next, you will ask the user the **quantity of this food** they would like to purchase.
 - . From the given information, **calculate and add to the sub total**.
 - . Display the menu again.
 2. **View cart**
 - . The user's current cart total and number of items will be displayed.

If the user chose 2 burgers and 1 order of fries, it should show the following:

```
-----Cart-----  
Number of items: 3  
Total: $29.0  
-----
```

- . Display the menu again.
3. **Manage order.**

- The user will be able to clear their cart. However, before clearing the cart, give the following message to the user: **Are you sure you would like to clear your cart?**
- If the user enters **yes**, clear the cart. In other words, "CART" should be blank. If the user enters **no**, display **"Cart not changed. Going back to menu."**
- Display the menu again.

4. Checkout

- The user will be able to view the number of items and their total (including tax 7.25%).
- Ask the user to select pickup or delivery. If the user selects delivery, add a \$5.00 delivery fee to the total and continue and ask for an address. If the user selects pickup, just continue.
- Ask the user to enter their 16-digit card number to complete the order.
- Print out their receipt which should include:
 - The number of items they purchased.
 - Their total
- Terminate the program.
- **[EXTRA CREDIT: 10 points]** If the user selects delivery, ask the user if they would like to provide a tip, and allow them to type in a percentage and add it to the total.

5. Exit UTEP Eats

- Tell the user **"Thank you for using UTEP Eats. Goodbye!"** and terminate the program.

Sample output per menu choice:

[Option 1: Add a food]

```
Welcome to UTEP Eats!
-----Menu-----
Choose an option (1-5):
1. Add a food
2. View cart
3. Clear cart
4. Checkout
5. Exit
-----
```

Burger 12.00
Fries 5.00
ChickenSandwich 10.00
TurkeySandwich 9.00
CaesarSalad 8.00
Waffles 10.50
ChickenStrips 8.50
QuinoaBowl 9.50
Nachos 10.00
TunaSalad 10.50
Tacos 11.00
Cookie 4.00
IceCream 7.00
Soda 2.50
MacAndCheese 5.50
Juice 3.00
Coffee 2.50
Soup 7.00

Please type the food you want to add:

|

Please type the food you want to add:

Soup

Soup

-----Cart-----

Number of items: 1

Total: \$7.0

-----Menu-----

Choose an option (1-5):

1. Add a food

2. View cart

3. Clear cart

4. Checkout

5. Exit

[Option 2: View Cart]

-----Cart-----

Number of items: 1

Total: \$7.0

[Option 3: Clear Cart]

```
Your cart is now empty.  
Number of items: 0  
Total: $0.0
```

[Option 4: Checkout]

If you choose pickup:

```
Please choose an option below:  
1. Pickup    2. Delivery  
1  
Order information  
Number of items: 2  
Total: $18.2325  
Please enter your 16 digit card number to complete the order:  
1234123412341234  
1234123412341234  
Success! Thank you for shopping with UTEP Eats!  
-----Receipt-----  
Number of items: 2  
Total: $18.2325  
-----Receipt-----
```

If you choose Delivery:

Please choose an option below:

1. Pickup 2. Delivery

2

There is a \$5 delivery fee.

Please enter your address:

123 Miner Way

Would you like to add a tip?

1. Yes 2. No

2

Order information

Number of items: 2

Total: \$19.478749999999998

Address: 123 Miner Way

Please enter your 16 digit card number to complete the order:

|

Please enter your 16 digit card number to complete the order:

1234123412341234

1234123412341234

Success! Thank you for shopping with UTEP Eats!

-----Receipt-----

Number of items: 2

Total: \$19.478749999999998

-----Receipt-----

Ending program.

[Option 5: Exit UTEP Eats]

```
-----Menu-----  
Choose an option (1-5):  
1. Add a food  
2. View cart  
3. Clear cart  
4. Checkout  
5. Exit  
-----  
5  
Cart abandoned. Goodbye!  
Ending program.
```

Tips:

- Be sure to watch out for syntax errors, especially where it concerns opening and closing parentheses and braces.
- Comment where your loops start and end so you can more easily keep track of them
- Careful with your use of scanners:
 - Know what your scanner's purpose is.
 - Be on the lookout if cursor does not go to next line when reading user input
- Be aware of when to use “==” vs. “.equals()”

Deliverables: You are expected to submit one file in Blackboard:

- (i) `CL1_YourLastName.java` --- the java file of your program.

Grading Criteria:

Checklist	Score
<p>The program has proper documentation. “Certificate of Acknowledge” comment is included.</p> <pre> /* Your Full Name [CS1101] Comprehensive Lab 1 This work is to be done individually. It is not permitted to. share, reproduce, or alter any part of this assignment for any purpose. Students are not permitted from sharing code, uploading this assignment online in any form, or viewing/receiving/ modifying code written from anyone else. This assignment is part. of an academic course at The University of Texas at El Paso and a grade will be assigned for the work produced individually by the student. */ </pre>	5 pts
<p>Check-In</p> <ol style="list-style-type: none"> [5 pts] Students must have an idea of a solution to CL1. [5 pts] Students must have, at minimum, a working menu with outputs on what the user selected. 	10 pts
Program successfully compiles and runs	10 pts
<p>Implementation</p> <ol style="list-style-type: none"> [10 pts] The program uses conditional statements and loops. Uses the correct way to compare string values and number values. [10 pts] Program allows user to enter more than 1 item and displays the correct information. [5 pts] Cart total and tax calculations are correct and complete. [5 pts] Calculations are done mathematically in code and not hardcoded [10 pts] Programs reads items information from the given file. 	40 pts
<p>Variable Names and Types</p> <ol style="list-style-type: none"> [5 pts] Correct types for each variable [5 pts] Correct naming conventions (class name is camel case but first letter is capitalized). Variables are camel case, but first letter is in lowercase. [5 pts] Variables should have meaningful variable names 	15 pts
Program output follows the correct format and style as the samples.	5 pts
The deliverable follows proper name	2 pts
The program is indented properly	3 pts
Demo	10 pts
Total	100 pts

Late submission: [-10] points for every 24 hours after the deadline.

If you need any clarification, please ask your TA/IA for further details.