# Module three: Critical Thinking Assignment

## Part 1: Program to calculate the total cost of a meal

### Pseudocode

1. Start; Display “Please enter the cost of the meal:”
2. Repeat the following steps until a valid cost is entered:  
    a. Ask the user for input for the cost of the meal and store it in cost\_of\_meal (convert input to float)  
    b. If the input is less than 1, display error.  
    c. If input is not a number, display error.   
    d. If valid, break the loop
3. Logic to calculate the tip in tip\_cost (18% of cost of the meal)
4. Logic to calculate the sales tax in sales\_tax (7% of cost of the meal)
5. Add cost\_of\_meal, tip\_cost, sales\_tax, and store the result in total\_cost\_of\_meal
6. Display the result.
7. End

### Test

1. Run test; input value less than 1. Ensure error message shows.
2. Input negative value ensure the error message shows.
3. Input string value and ensure it shows value error message.
4. Input a numerical value ensure proper calculation and logic is applied.

### Source Code

A screenshot of a computer program

AI-generated content may be incorrect.

### Output

A computer screen with a black background

AI-generated content may be incorrect.

## Part 2: Alarm Clock 24-Hour Clock

### Pseudocode

1. Start; Display “Please enter the time now in hours (0-23)”

2. Repeat the following steps until a valid current time is entered:  
 a. Ask the user for input for the current time in hours and store it in time\_now (convert to int)  
 b. If time\_now is not between 0 and 23, display error message.  
 c. If valid, break the loop  
 d. If input is invalid, display error message.

3. Repeat the following steps until a valid number of hours to wait is entered:  
 a. Ask the user for input for the number of hours to wait and store it in alarm\_hours\_to\_wait (convert to int)  
 b. If input is not a number, display error message.  
 c. If alarm\_hours\_to\_wait is negative, display error message.  
 d. If valid, break the loop

4. Logic to calculate the alarm time; and store it in alarm\_time variable

5. Display the result.

6. End

### Test

1. Run test; input value less than 1. Ensure error message shows.
2. Input negative value ensure the error message shows.
3. Input string value and ensure it shows value error message.
4. Input a numerical value ensure proper calculation and logic is applied.

### Source Code

A screenshot of a computer program

AI-generated content may be incorrect.

### Output

A black screen with white text

AI-generated content may be incorrect.

**Git Repository**  
The source code and files for this assignment are also available on GitHub:  
[Bishal-Shah310/CSC-500: This is for School purpose only.](https://github.com/Bishal-Shah310/CSC-500)

Below is a screenshot of the repository:

A screenshot of a computer

AI-generated content may be incorrect.