

First assignment

Programming in C

50% of the final grade will be determined by assignments and 50% by the final test

A maximum of one additional point may be awarded to your final grade based on your engagement and attendance in lectures and labs.

Solve 2 of the following exercises:

5 points for each solved exercise

Deadline: TBA on Team assignments

1.

Write a program to read a number of units of length (a float) and print out the area of a circle with that radius. Assume that the value of pi is 3.14159. After that, change the type to double and compare the results.

2.

Read two integers and compute their sum, average and sum of the squares of the numbers.

3.

Write a program that computes out the largest and smallest values of 5 numbers read from the input.

4.

Given as input a floating number of centimeters, print the corresponding number of feet (integer) and inches (floating, 1 decimal), with the inches given to an accuracy of one decimal place.
Assume 2.54 centimeters per inch, and 12 inches per foot.

5.

Knowing that we have coins of 1, 2 and 5 units, determine the minimum number of coins to pay a given amount.

6.

Given the natural number h and m , that represent the current time expressed in hours and minutes, compute the time after x hours and y minutes.

7.

Being given the values of the diagonals of a diamond shape (romb), compute the area and perimeter of the diamond shape.

Bonus asignment:

A maximum of 2 bonus points are applicable to this assignment

1. Create an account on <https://leetcode.com>
2. Solve the first 2 problems on Leetcode, using C
 - [Two Sum](#) (Easy)
 - [Add Two Numbers](#) (Medium)
3. Work on your own for the initial solution (only use stack overflow/Google for specific implementation blocks, not the entire problem). Consider this a challenge for yourself.
4. If your initial implementation is successful, seek out improved algorithms and iterate your submission to improve your score. Still, do not copy and paste the code; implement it yourself. This will help you in becoming an outstanding developer.

Submission of Solutions

SCREEN RECORDING VIDEO

After you've finished the exercises, create a screen recording of the solution and explain the code and techniques you used to successfully implement it. You can use a free tool like OBS (<https://obsproject.com/download>) for this.

SEND VIDEOS AND SOLUTIONS

1. Upload the screen recording to the Team assignment once it has been completed.
2. Create a zip file with the source code and upload it to the assignment as well. GitHub or other Git repositories with the code are also accepted instead of the zip file with the solutions.