

Week 1 – 1:

–Overview of C, Constant, Variable and Data Types

ROLL NO.:241501225

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Q1) This is a simple challenge to help you practice printing to stdout.

We're starting out by printing the most famous computing phrase of all time! In the editor below, use either `printf` or `cout` to print the string **Hello, World!** to stdout.

Input Format

You do not need to read any input in this challenge.

Output Format

Print **Hello, World!** to stdout.

Sample Output 1

Hello, World!

Code:

Answer: (penalty regime: 0 %)

```
1 #include <stdio.h>
2 int main(){
3     printf("Hello, World!\n");
4     return 0;
5 }
```

OUTPUT:

	Expected	Got	
✓	Hello, World!	Hello, World!	✓

Passed all tests! ✓

Q2) This challenge will help you to learn how to take a character, a string and a sentence as input in C.

To take a single character `ch` as input, you can use `scanf("%c", &ch);` and `printf("%c", ch)` writes a character specified by the argument `ch` to stdout:

```
char ch;
```

```
scanf("%c", &ch);
```

```
printf("%c", ch);
```

This piece of code prints the character **ch**.

Task

You have to print the character, **ch**.

Input Format

Take a character, **ch** as input.

Output Format

Print the character, **ch**

Code:

```
1 #include <stdio.h>
2 int main(){
3     char ch;
4     scanf("%c",&ch);
5     printf("%c",ch);
6     return 0;
7 }
```

OUTPUT:

	Input	Expected	Got	
✓	c	c	c	✓

Passed all tests! ✓

Q3) Problem Statement:

The fundamental data types in c are int, float and char. Today, we're discussing int and float data types.

The printf() function prints the given statement to the console. The syntax is printf("format

string",argument_list);. In the function, if we are using an integer, character, string or float as argument, then in the format string we have to write %d (integer), %c (character), %s (string), %f (float) respectively.

The scanf() function reads the input data from the console. The syntax is scanf("format string",argument_list);. For ex: The scanf("%d",&number) statement reads integer number from the console and stores the given value in variable number.

To input two integers separated by a space on a single line, the command is scanf("%d %d", &n, &m), where n and m are the two integers.

Task

Your task is to take two numbers of int data type, two numbers of float data type as input and output their sum:

1. Declare 4 variables: two of type int and two of type float.
2. Read 2 lines of input from stdin (according to the sequence given in the 'Input Format' section below) and initialize your 4 variables.
3. Use the + and – operator to perform the following operations:
 - Print the sum and difference of two int variable on a new line.
 - Print the sum and difference of two float variable rounded to one decimal place on a new line.

Input Format

The first line contains two integers. The second line contains two floating point numbers.

Constraints:

$1 \leq \text{integer variables} \leq 104$, $1 \leq \text{float variables} \leq 104$

Output Format

Print the sum and difference of both integers separated by a space on the first line, and the sum and difference of both float (scaled to 1 decimal place) separated by a space on the second line.

Sample Input

```
10 4
4.0 2.0
```

Sample Output

```
14 6
```

6.0 2.0

Code:

Answer: (penalty regime: 0 %)

```
1 #include<stdio.h>
2 int main()
3 {
4     int a,b;
5     float x,y;
6     scanf("%d%d",&a,&b);
7     scanf("%f%f",&x,&y);
8     printf("%d %d\n",a+b,a-b);
9     printf("%.1f %.1f",x+y,x-y);
10 }
```

OUTPUT:

	Input	Expected	Got	
✓	10 4 4.0 2.0	14 6 6.0 2.0	14 6 6.0 2.0	✓
✓	20 8 8.0 4.0	28 12 12.0 4.0	28 12 12.0 4.0	✓

Passed all tests! ✓