**Introduction to programming with C – part 2**

**DO NOT USE HELP FROM INTERNET FOR THIS EXERSCISE!!!DO IT BY YOURSELF!!**

**C Data Types – part 2**

**int**

Integers are whole numbers that can have both zero, positive and negative values but no decimal values. For example, 0, -5, 10

We can use int for declaring an integer variable.

**int id;**

Here, id is a variable of type integer.

You can declare multiple variables at once in C programming. For example,

**int** id, age;

The size of int is usually 4 bytes (32 bits). And, it can take 232 distinct states from -2147483648 to 2147483647.

**float and double**

float and double are used to hold real numbers.

**float** salary;

**double** price;

What's the difference between float and double?

The size of float (single precision float data type) is 4 bytes. And the size of double (double precision float data type) is 8 bytes.

**char**

Keyword char is used for declaring character type variables. For example,

**char** test = 'h';

The size of the character variable is 1 byte.

You can always check the size of a variable using the **sizeof()** operator.

**Constants**

If you want to define a variable whose value cannot be changed, you can use the **const** keyword. This will create a constant. For example,

**const double PI = 3.14;**

Notice, we have added keyword **const**.

**Format Specifiers for I/O**

%d for int

%f for float

%lf for double

%c for char

**C Input**

In C programming, **scanf()** is one of the commonly used function to take input from the user. The scanf() function reads formatted input from the standard input such as keyboards.

Here is an example:

#include <stdio.h>

int main()

{

int testInteger;

printf("Enter an integer: ");

scanf("%d", &testInteger);

printf("Number = %d",testInteger);

return 0;

}

Output

Enter an integer: 4

Number = 4

For the exercises use the online compiler and debugger <https://www.onlinegdb.com/>.

Select C Language in the upper right corner selection list.

**Exercise 1.** Create your own constant. Print it.

1. Try to change its value and observe the result.
2. Change it to variable so that it value can be printed

**Exercise 2.** Print the size of int, float, double and char using the sizeof() function

**Exercise 3.**

1. Run the example about **scanf()** function and analyse it.
2. Using the **scanf()**function toenter your faculty number and then print it.
3. Write a program to ask for the user’s name and to print “Hello, <the name>!”