

North South University
Department of Electrical and Computer Engineering
CSE 115L: Fundamentals of Computer Programming
Week 01 – Introduction

<p>Example 1: Write a program that prints:</p> <p style="text-align: center;">"North South University" Hello class of cse115L!! Welcome to NSU.</p>	<p>Example 2: Write a program that prompts the user to insert an integer value, a decimal number and his name and print the inserted value as output.</p>
<pre>#include<stdio.h> #include<stdlib.h> int main() { printf("\t\t North South University\n\n"); printf("Hello class of cse115L!! Welcome to NSU. \n"); }</pre>	<pre>#include<stdio.h> int main(){ int num; float deci; char name[20]; printf("Enter a number:"); scanf("%d",&num); printf("The number is %d\n",num); printf("Enter a decimal number:"); scanf("%f",&deci); printf("The number is %.2f\n",deci); printf("Enter your name:"); scanf("%s",&name); printf("Your name is: %s", name); return 0; }</pre>
<p>Example 3: Data types and their size in C.</p>	<p>Example 4: Write a program that reads in the radius of a circle and prints the circle's diameter, circumference and area.</p>
<pre>#include<stdio.h> int main(){ int a; float b; double c; char d; long int longInt; signed int no; printf("Size of int: %d bytes\n",sizeof(a)); printf("Size of float: %d bytes\n",sizeof(b)); printf("Size of double: %d bytes\n",sizeof(c));</pre>	<pre>#include<stdio.h> int main() { float const PI = 3.142; float radius; float area, circumference, diameter; printf("Enter the radius of a circle:"); scanf("%f",&radius); diameter= 2*radius; circumference= 2*PI*radius; area= PI * radius * radius;</pre>

<pre>printf("Size of char: %d byte\n",sizeof(d)); printf("Size of Long int: %d byte\n",sizeof(longInt)); printf("Size of signed int: %d byte\n",sizeof(no)); return 0; }</pre>	<pre>printf("The Diameter is: %.2f \n",diameter); printf("The Circumference is: %.2f \n",circumference); printf("The area is: %.2f \n",area); }</pre>
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Summary

scanf (use to take input from user)	printf(display something on the screen)
<pre>%d use to take integer input %f use to take floating number input %s string input %c character input %lf use to take double number input</pre>	<pre>%d to display integer %f to display float or double %c to display character %s to display string</pre>

NOTES: To take string as input including ‘Space’ use gets(stringVariableName).

Task (10 marks)

Task 1. Write a program that asks the user to enter two numbers, obtains the two numbers from the user and prints the sum, product, difference, quotient and remainder of the two numbers.

Input:	Output:
Insert first number: 10 Insert second number: 5	Sum = 15 Product = 50 Difference = 5 Quotient = 2 Remainder = 0

Task 2. Write a program that reads in 3 numbers and prints their average.

Input:	Output:
Insert first number: 3 Insert second number: 8 Insert third number: 2	The average is: 4.3

Task 3: Convert Celsius to Fahrenheit unit using the following formula. Take the value of C as input from user and calculate the value of F.

$$F = C * (9/5) + 32$$

Home Tasks

1. Ask user for two integers a and b. Then swap (interchange) the values of a and b. That means, a should get the value of b and b should get the value of a.

Enter a: 7

Enter b: 3

After swapping, a: 3 and b: 7