**North South University**

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

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| **Example 1:** Write a program that prints:  “North South University”  Hello class of cse115L!! Welcome to NSU. | **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. |
| #include<stdio.h>  #include<stdlib.h>  int main()  {  printf("\t \" North South University\" \n \n"); printf("Hello class of cse115L!! Welcome to NSU. \n");  } | #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;  } |

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| **Example 3:** Data types and their size in C. | **Example 4:** Write a program that reads in the radius of a circle and prints the circle’s diameter, circumference and area. |
| #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)); | #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; |

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;

}

printf("The Diameter is: %.2f \n",diameter); printf("The Circumference is: %.2f \n",circumference); printf("The area is: %.2f \n",area);

}

**Summary**

**scanf ( use to take input from user)**

**%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**

**printf( display something on the screen)**

**%d to display integer**

**%f to display float or double**

**%c to display character**

**%s to display string**

**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.

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| 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.

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| 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