



Department of Computer Science & Engineering

Problem Solving with C Laboratory-UE19CS152

Week-2

Objective: Students will learn Input, Output functions and its formatting, escape sequence, variable declaration & definition, different data types and different Errors in C program.

1) Write a program in 'C' to output as below:

Output:

```
#include <stdio.h>

int main()
{
    printf("Hello world\n");
    return 0;
}
```

2) Write a program to swap two variables using another variable.

Output:

For Example

Enter value of a and b

3 4

Before swapping: Value of a is 3 and b is 4

After swapping: Value of a is 4 and b is 3

3) a) Write a program to read the student information such as roll number, name, semester, section, phone number, marks, percentage from the user and display it in the same order.

Output:

For Example

The details of student:

Roll no: 123

Name: Pooja

Semester: 3

Section:A

Phone_no: 1234567890

Marks: 56.000000

Percentage: 78.000000

4)

i) Write a program to calculate the euclidean distance between two points.

Output:

For Example

Input x1: 3

Input y1: 4

Input x2: 4

Input y2: 3

Distance between the points: 1.414214

ii) Write a C program to find Area of a triangle, if three sides are given.

Output:

For Example

Enter the values of a, b and c

6.0

5.0

7.0

Area of a triangle = 14.696938

Hint: use sqrt() and pow() functions, defined in #include<math.h>

Compilation: gcc filename -lm

Execution: ./a.out

5) Identify errors if any in the below codes, by executing different steps with gcc options :

Hint-Compile time ,link time or runtime.

i) Example:1

```
#include <stdio.h>
int main(void)
{
    printf("Hello world\n")
    return 0;
}
```

ii) Example:2

```
#include <stdio.h>
int main(void)
{
    printf("Result =%d\n",25/0);
    return 0;
}
```

iii) Example:3

```
#include <stdio.h>
int main(void)
{
    int x;
    int y;
    float ratio;
    printf("Enter x and y value to find ratio\n");
    scanf("%d %d",&x,&y);
}
```

```
    ratio=(x+y)/(x-y);
    printf("Result of ratio=%f\n",ratio);
    return 0;
}
```

iv) Example:4

```
#include <stdio.h>
int main(void)
{
    int a;
    a=a+11;
    printf("a=%d\n",a);
    return 0;
}
```

v) Example: 5

```
#include <stdio.h>
int main(void)
{
    int a=10;int b;char c='A';
    b=a*c;
    printf("b=%d\n",b);
    return 0;
}
```

vi) Example:6

```
#include <stdio.h>
int main(void)
{
    Printf("Hello World\n");
    return 0;
}
```

vii) Example:7

```
#include <stdio.h>
```

```
int main(void)
```

```
{
```

```
    printf("%s %s", "apple", "kiwi\n", "orange\n");
```

```
    printf("%s %s %s %s\n", "apple", "kiwi", "orange\n");
```

```
    return 0;
```

```
}
```