

Institute of Computer Technology
B. Tech. Computer Science and Engineering

Sub: ESFP – I
Course Code: 2CSE102
Practical – 2

Name:Dwij vatsal desai
Roll No:BDA-08
Branch:BDA
Class: B
Batch:14

[Q-1] Problem Definition:

India is a country with moderate weather. So people here measure temperature in Celsius scale. America is a country with cold weather. So people there measure temperature in Fahrenheit scale. Some students of GNU are going for an international exposure visit to America. Since it is the first time for them, they find it very difficult to follow their temperature readings. Write a program to help them understand the American temperature readings easier, based on their Indian way of understanding.

ALGORITHM:

Step 1: Start.

Step 2: Write the main method.

Step 3: Initialize variables - Fahrenheit and Celsius.

Step 4: Ask value from the user in Fahrenheit and display.

Step 5: Celsius=((Fahrenheit-32)*5/9).

Step 6: Print the temperature in the Indian System.

Step 7: return 0

Step 8: End.

Solution:

Code:-

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

```
void main()
```

```
{
```

```
    float temperature2;
```

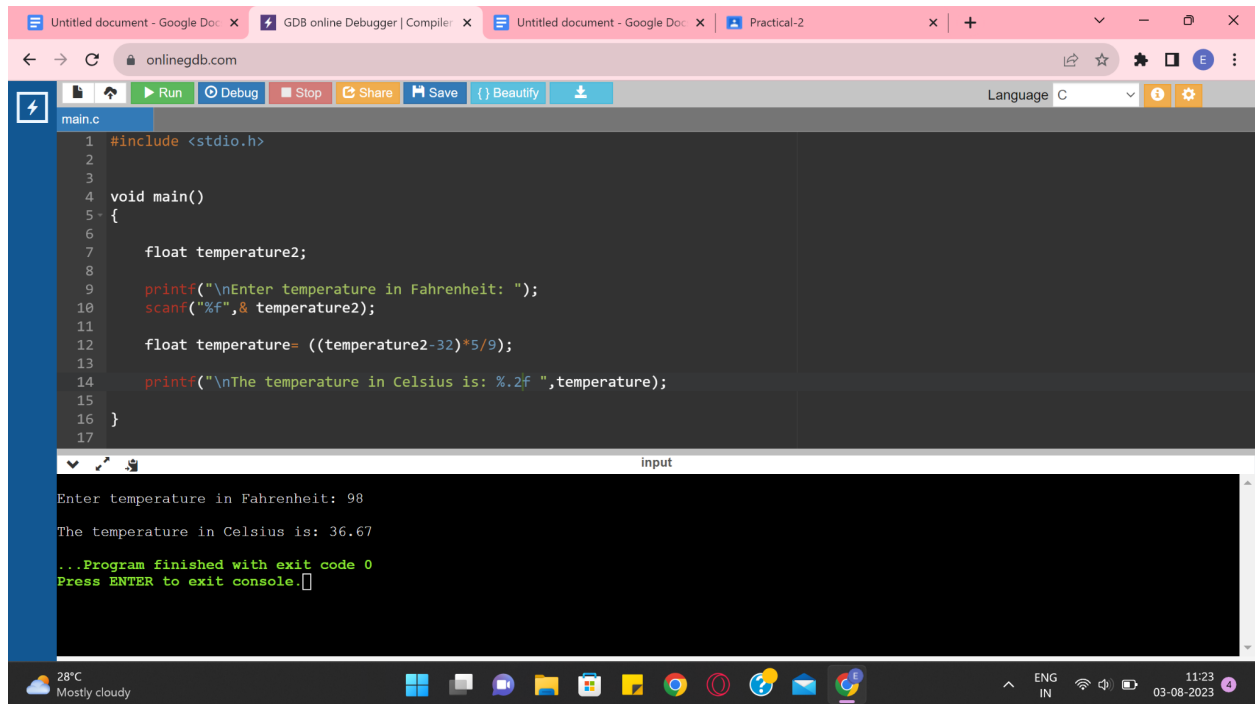
```
    printf("\nEnter temperature in Fahrenheit: ");
```

```
    scanf("%f",& temperature2);
```

```
    float temperature= ((temperature2-32)*5/9);
```

```
    printf("\nThe temperature in Celsius is: %.0f ",temperature);
```

```
}
```



```
1 #include <stdio.h>
2
3
4 void main()
5 {
6     float temperature2;
7
8     printf("\nEnter temperature in Fahrenheit: ");
9     scanf("%f",& temperature2);
10
11     float temperature= ((temperature2-32)*5/9);
12
13     printf("\nThe temperature in Celsius is: %.2f ",temperature);
14
15 }
16
17
```

input

Enter temperature in Fahrenheit: 98

The temperature in Celsius is: 36.67

...Program finished with exit code 0
Press ENTER to exit console.

[Q-2] Problem Definition:

Once upon a time in a small town, there was a young and enthusiastic programmer named Alice. She loved solving problems and helping others with her coding skills. One day, the townspeople came to Alice with a request for a special program that could calculate the area of various mathematical objects - circles, rectangles, and triangles.

ALGORITHM:

Step 1:- Start

Step 2:- Write the main method.

Step 3:- Ask about what area he/she requires.

Step 4:- Ask him/her about measurement of the following shape.

Step 5:- Answer the area of the following shape.

Step 6:- End.

Solution:

Code:-

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

```
void main()
```

```
{
```

```
    float r,l,h,w,b;
```

```
    int Opition;
```

```
    printf("Enter: 1: For the area of circle\n" "Enter: 2: For the area of  
rectangle\n" "Enter: 3: For the area of triangle\n");
```

```
    scanf("%d",&Opition);
```

```
    if(Opition==1)
```

```
    {
```

```
        printf("Enter the radius of circuler fountain: \a");
```

```
        scanf("%f",&r);
```

```
        printf("\nThe area of the circuler fountain is: %.2fsq.  
unit",3.14*r*r);
```

```
    }
```

```
    else if(Opition==2)
```

```
    {
```

```
        printf("Enter the Length and Width of rectangular  
playground:\a\n");
```

```
        scanf("%f %f",&l,&w);
```

```
        printf("\nThe area of the circuler fountain is: %.2fsq. unit",l*w);
```

```
    }
```

```
    else if(Opition==3)
```

```
    {
```

```

printf("Enter the Hight and Base of triangular garden:\a\n");
scanf("%f %f",&b,&h);

printf("\nThe area of the triangular garden is: %fsq.
unit",(1*b*h)/2);
}
}

```

The screenshot displays a web-based GDB debugger interface. The top section shows the source code for a C program named 'main.c'. The code includes `<stdio.h>` and defines a `main()` function. Inside `main()`, it declares `float r,l,h,w,b;` and `int Option;`. A `printf` statement prompts the user to enter 1 for the area of a circle, 2 for a rectangle, or 3 for a triangle. Below this, there is a line for input, and then a `printf` statement that calculates and displays the area of a circle using the formula πr^2 (though the code snippet in the image is partially obscured, the output suggests this calculation). The bottom section of the debugger shows the 'input' window with the user's interactions: they entered '1' for the circle area, then '4' for the radius. The program output shows 'The area of the circular fountain is:50.24sq. unit' and a message indicating the program finished with exit code 0.

```

main.c
1 #include <stdio.h>
2
3 void main()
4 {
5     float r,l,h,w,b;
6     int Option;
7
8     printf("Enter: 1: For the area of circle\n" "Enter: 2: For the area of rectangle\n" "Enter: 3: For the area of triangle\n");
9
input
Enter: 1: For the area of circle
Enter: 2: For the area of rectangle
Enter: 3: For the area of triangle
1
Enter the radius of circular fountain: 4
The area of the circular fountain is:50.24sq. unit
...Program finished with exit code 0
Press ENTER to exit console.

```

GDB online Debugger | Compiler x Untitled document - Google Doc x GDB online Debugger | Compiler x +

onlinegdb.com

Language C

```
main.c
1 #include <stdio.h>
2
3 void main()
4 {
5     float r,l,h,w,b;
6     int Option;
7
8     printf("Enter: 1: For the area of circle\n" "Enter: 2: For the area of rectangle\n" "Enter: 3: For the area of triangle\n");
9
10
```

input

Enter: 1: For the area of circle
Enter: 2: For the area of rectangle
Enter: 3: For the area of triangle
2
Enter the Length and Width of rectangular playground:
4 5

The area of the circular fountain is: 20.00sq. unit

...Program finished with exit code 0
Press ENTER to exit console.

SENSEX -1.18%

ENG IN 14:28 03-08-2023

GDB online Debugger | Compiler x Untitled document - Google Doc x GDB online Debugger | Compiler x +

onlinegdb.com

Language C

```
main.c
1 #include <stdio.h>
2
3 void main()
4 {
5     float r,l,h,w,b;
6     int Ooption;
7
8     printf("Enter: 1: For the area of circle\n" "Enter: 2: For the area of rectangle\n" "Enter: 3: For the area of triangle\n");
9
10
```

input

Enter: 1: For the area of circle
Enter: 2: For the area of rectangle
Enter: 3: For the area of triangle
3
Enter the Hight and Base of triangular garden:
3 4

The area of the triangular garden is: 6.000000sq. unit

...Program finished with exit code 0
Press ENTER to exit console.

30°C Haze

ENG IN 14:29 03-08-2023

