Expt. No. 02 Page No. 06

EXPERIMENT : 02

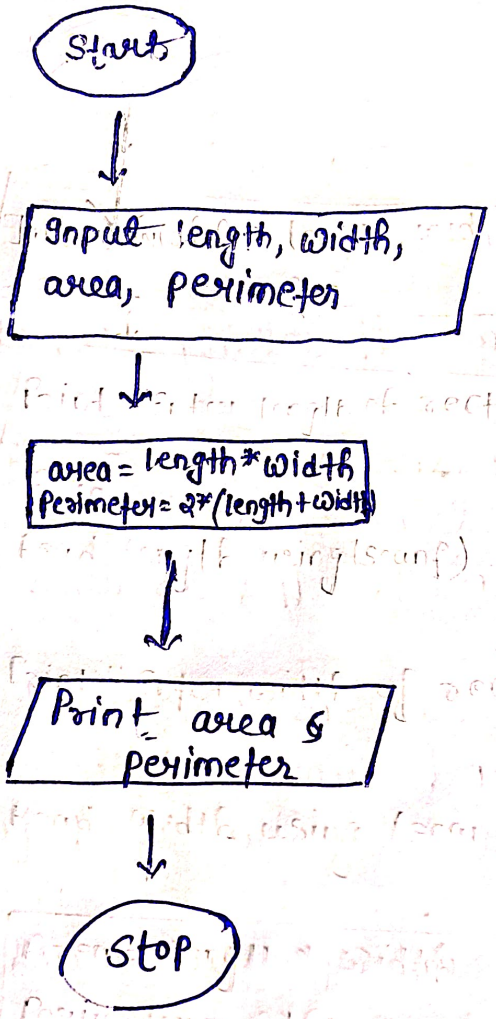
1) Write a program to calculate the area and perimeter of a rectangle based on its length and width.

* Algorithm :-

1) Start
2) Declare variables length, width, area, perimeter.
3) Print " Enter the length of rectangle :"
4) Read the length using sanf("%f", & length)
5) Print " Enter the width of the rectangle :"
6) Read the width using scanf("%f", & width)
7) Calculate area = length * ~~breo~~ width and perimeter = 2*(length + width)
8) Show output 'area' and 'perimeter'
9) Stop.

Teacher's Signature

Flowchart


Start
Input length, width, area, perimeter
area = length*width
Perimeter = 2*(length+width)
Print area & perimeter
Stop

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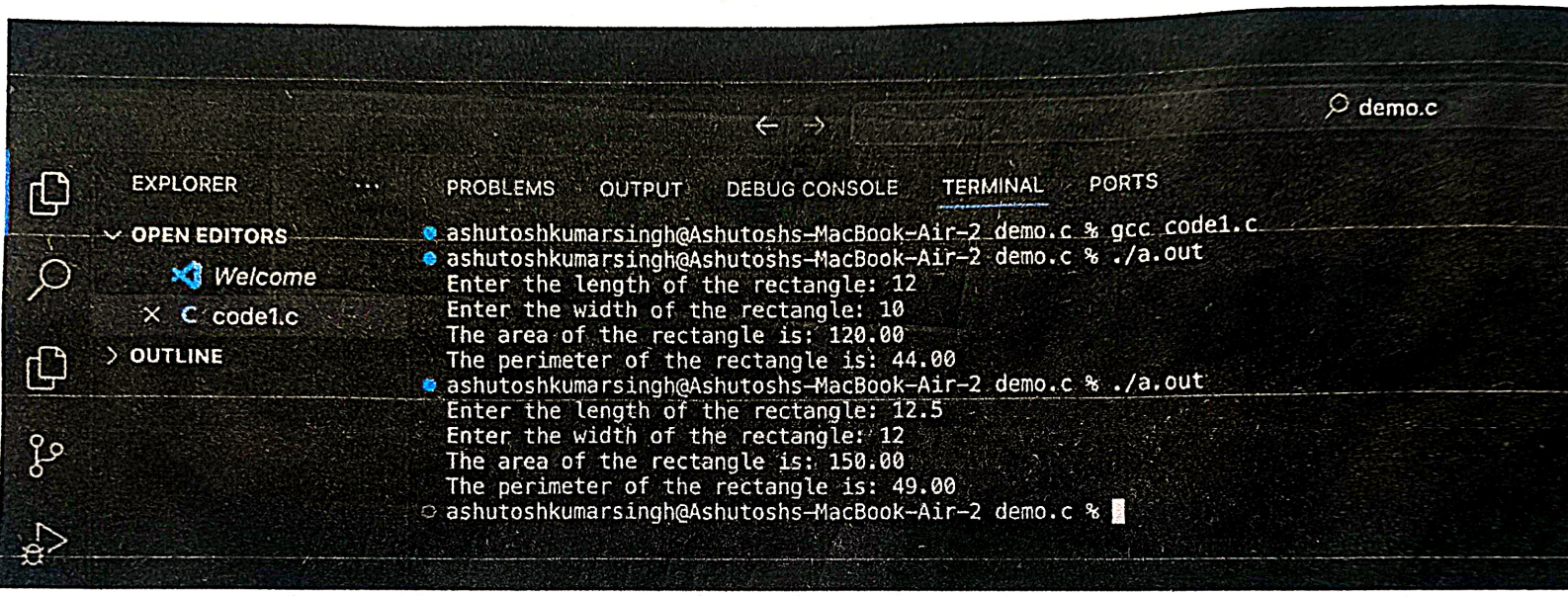
Code :-

```
#include <stdio.h>
int main() {
    float length, width, area, perimeter;

    // Prompt the user to enter the length of rectangle.
    printf("Enter the length of the rectangle: ");
    scanf("%f", &length);

    // Prompt the user to enter width of the rectangle.
    printf("Enter the width of the rectangle: ");
    scanf("%f", &width);

    // Calculate area
    area = length * width;

    // Calculate perimeter
    perimeter = 2 * (length + width);

    // Displaying the output:
    printf("The area of the rectangle is: %.2f\n", area
    printf("The perimeter of the rectangle is: %.2f\n", peri

    return 0;

}
```

Teacher's Signature


demo.c
EXPLORER
PROBLEMS
OUTPUT
DEBUG CONSOLE
TERMINAL
PORTS
OPEN EDITORS
Welcome
code1.c
OUTLINE
ashutoshkumarsingh@Ashutoshs-MacBook-Air-2 demo.c % gcc code1.c
ashutoshkumarsingh@Ashutoshs-MacBook-Air-2 demo.c % ./a.out
Enter the length of the rectangle: 12
Enter the width of the rectangle: 10
The area of the rectangle is: 120.00
The perimeter of the rectangle is: 44.00
ashutoshkumarsingh@Ashutoshs-MacBook-Air-2 demo.c % ./a.out
Enter the length of the rectangle: 12.5
Enter the width of the rectangle: 12
The area of the rectangle is: 150.00
The perimeter of the rectangle is: 49.00
ashutoshkumarsingh@Ashutoshs-MacBook-Air-2 demo.c %

Date

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2.) Write a program in C program to convert temperature from Celsius to farenheit using the formula:
$F = (C * 9/5) + 32$

* Algorithm:-

I) Start

II) Declare variables 'Celsius', 'fahrenheit'.

III) Print "Enter the temperature in Celsius.

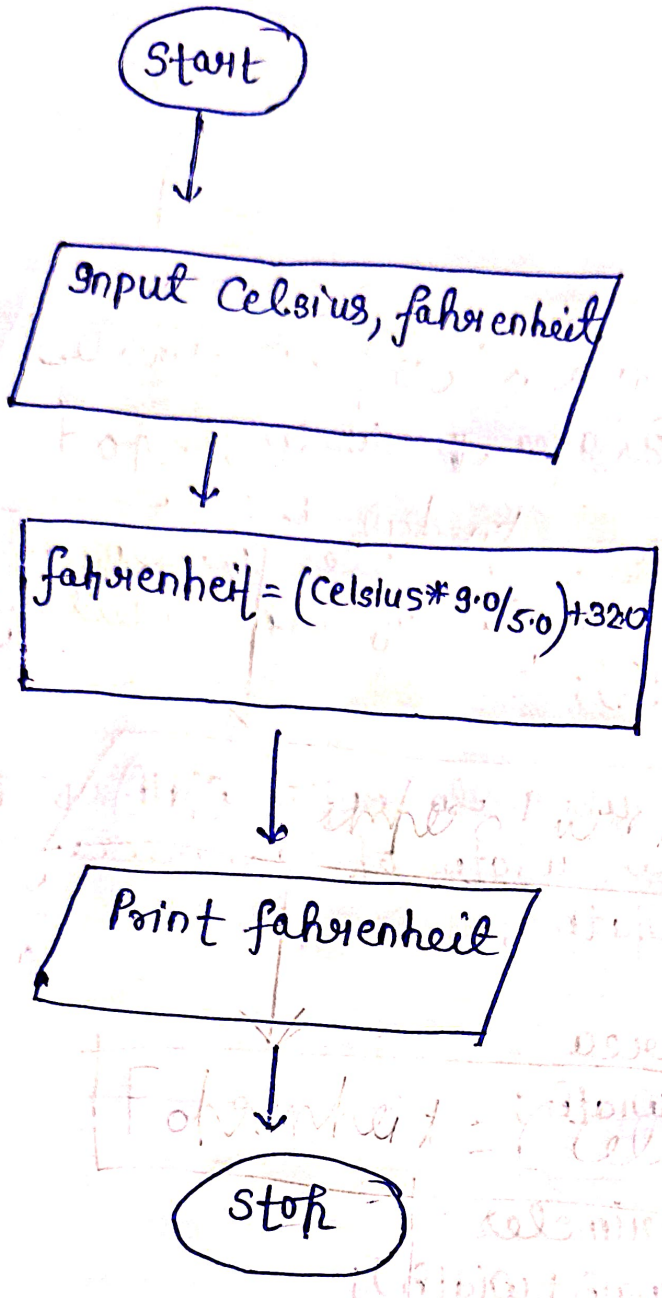
IV) Read the temperature in Celsius using scanf("%f", &celsius)

V) Calculate fahrenheit = (Celsius * 9.0/5.0) + 32.0 ;

VI) Display the converted value of Celsius as fahrenheit.

VII) Stop.

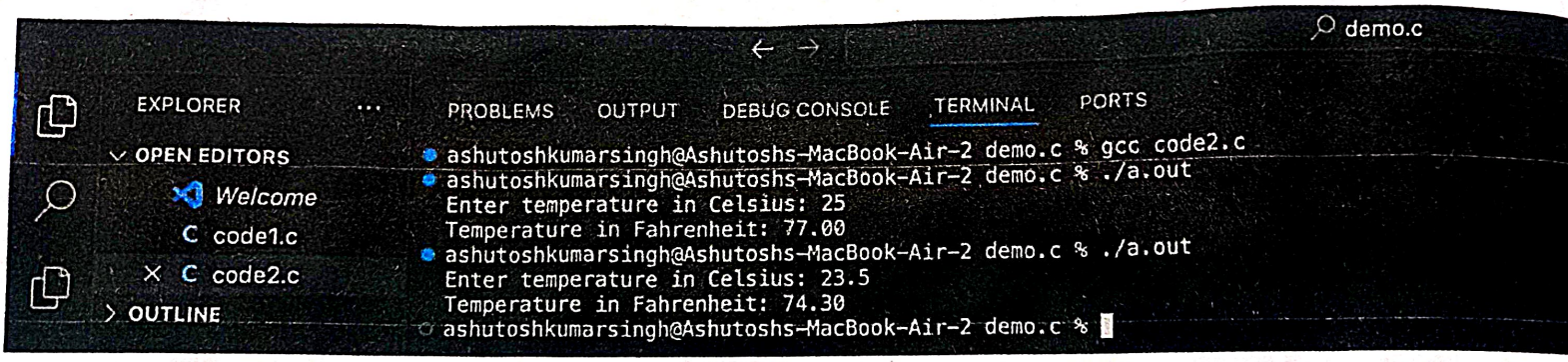
Teacher's Signature


Start
Input Celsius, fahrenheit
fahrenheit = (Celsius * 9.0/5.0)+32.0
Print fahrenheit
Stop

* Code :-

```
#include <stdio.h>
int main() {
    float celsius, fahrenheit;  // Assigning variables celsius, fahrenhe

    // Prompt the user to enter temperature in celsius
    printf("Enter temperature in celsius : ");
    scanf("%f", &celsius);

    // Apply the formula to convert celsius to fahrenheit:
    fahrenheit = (celsius * 9.0/5.0) + 32.0;

    // Display the converted temperature.
    printf("Temperature in Fahreinheit : %.2f\n", fahreinheit);
    return 0;

}
```

Teacher's Signature _____


demo.c
EXPLORER
PROBLEMS
OUTPUT
DEBUG CONSOLE
TERMINAL
PORTS
OPEN EDITORS
Welcome
code1.c
code2.c
OUTLINE
ashutoshkumarsingh@Ashutoshs-MacBook-Air-2 demo.c % gcc code2.c
ashutoshkumarsingh@Ashutoshs-MacBook-Air-2 demo.c % ./a.out
Enter temperature in Celsius: 25
Temperature in Fahrenheit: 77.00
ashutoshkumarsingh@Ashutoshs-MacBook-Air-2 demo.c % ./a.out
Enter temperature in Celsius: 23.5
Temperature in Fahrenheit: 74.30
ashutoshkumarsingh@Ashutoshs-MacBook-Air-2 demo.c %