

EXPERIMENT 2 : OPERATORS

Activity 1: WAP a C program to calculate the area and perimeter of a rectangle based on its length and width.

ALGORITHM

STEP1: Start

STEP2: Declare variables length, width, area, perimeter

STEP3: Read length, width

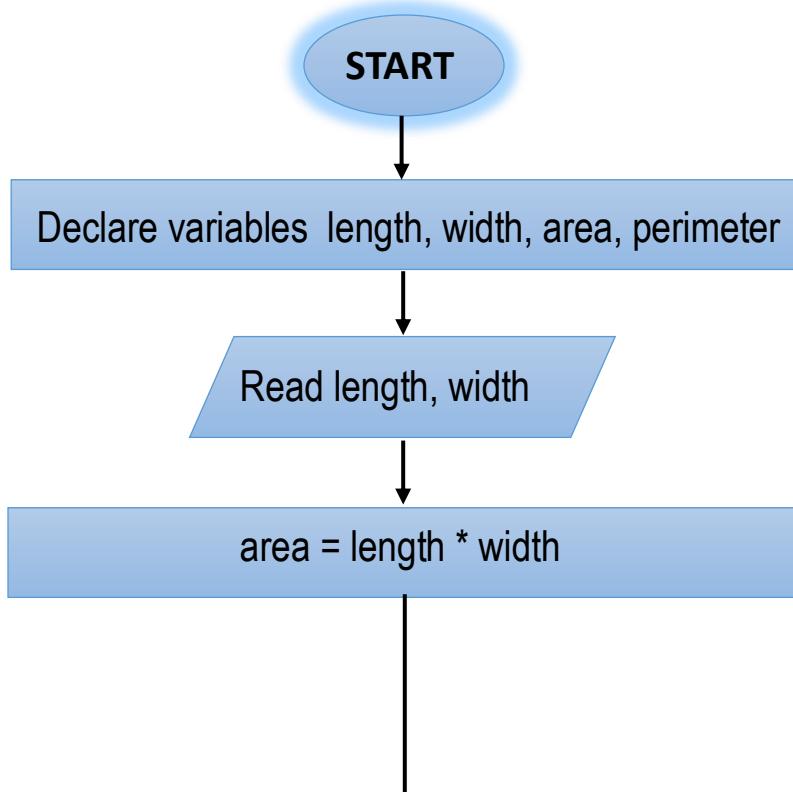
STEP4: area = length * width

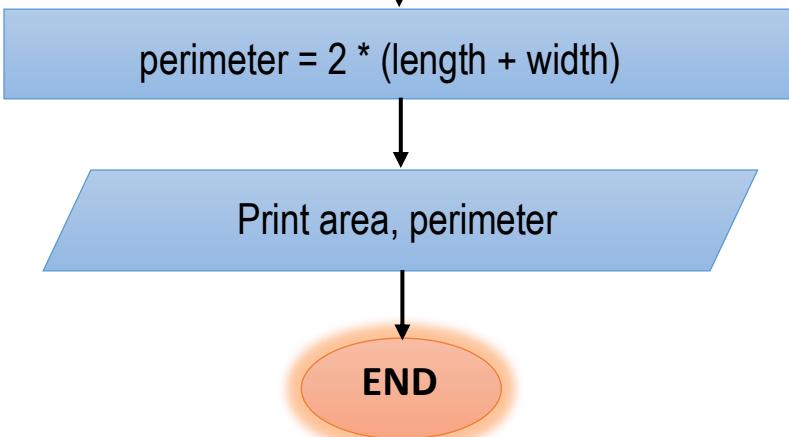
STEP5: perimeter = 2 * (length + width)

STEP6: Print area, perimeter

STEP7: End

FLOWCHART :





PSEUDOCODE :

```
START  
  
declare length, width, area, perimeter AS integer  
  
print "Enter the length of the rectangle: "  
input length  
  
print "Enter the width of the rectangle: "  
input width  
  
area ← length * width  
perimeter ← 2 * (length + width)  
  
print "Area of Rectangle = ", area  
print "Perimeter of Rectangle = ", perimeter  
  
END
```

CODE :

```
#include <stdio.h>

int main() {
    int length, width, area, perimeter;

    printf("Enter the length of the rectangle: ");
    scanf("%d", &length);
    printf("Enter the width of the rectangle: ");
    scanf("%d", &width);

    area = length * width;
    perimeter = 2 * (length + width);

    printf("Area of Rectangle = %d\n", area);
    printf("Perimeter of Rectangle = %d\n", perimeter);

    return 0;
}
```

OUTPUT:

The screenshot shows a terminal window with the following content:

```
PROBLEMS OUTPUT DEBUG CONSOLE TERMINAL PORTS

PS C:\Users\Lenovo\Downloads\C programming> cd "c:\Users\Lenovo\Downloads\C programming\" ; if ($?) { gcc tempCodeRunnerFile.c -o tempCodeRunnerFile } ; if ($?) { .\tempCodeRunnerFile }
Enter the length of the rectangle: 56
Enter the width of the rectangle: 43
Area of Rectangle = 2408
Perimeter of Rectangle = 198
PS C:\Users\Lenovo\Downloads\C programming>
```

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

ALGORITHM :

STEP1: Start

STEP2: Declare variables celsius, fahrenheit

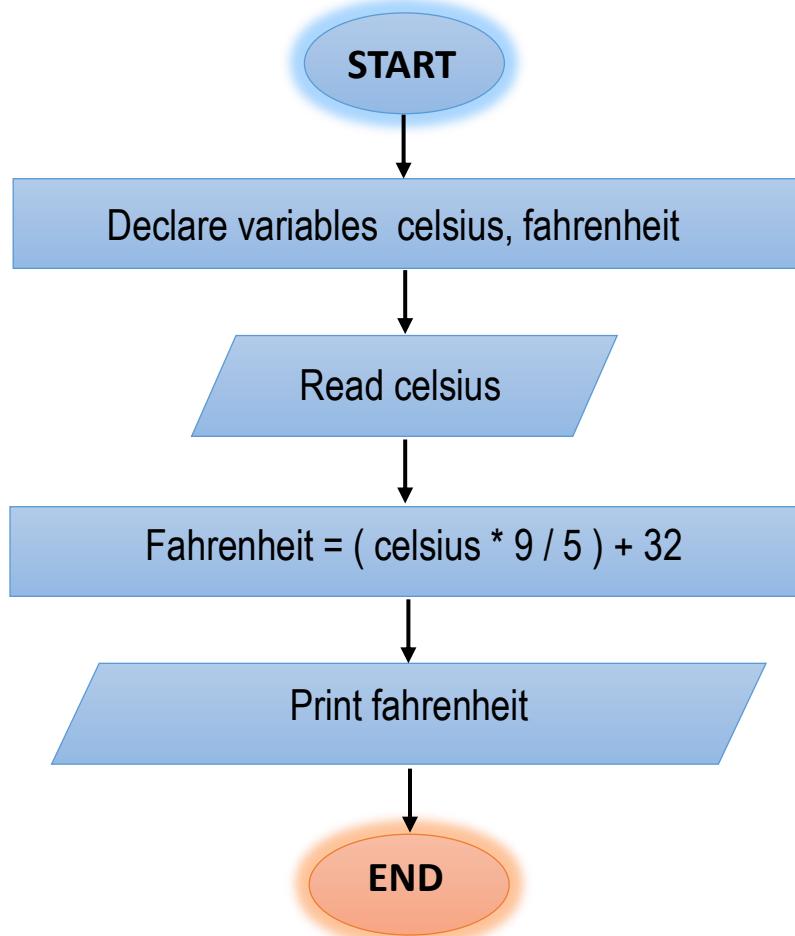
STEP3: Read celsius

STEP4: fahrenheit = (celsius * 9 / 5) + 32

STEP5: Print fahrenheit

STEP6: End

FLOWCHART :



PSEUDOCODE:

```
START

declare celsius, fahrenheit AS float

print "Enter temperature in Celsius: "
input celsius

fahrenheit ← (celsius * 9 / 5) + 32

print "Temperature in Fahrenheit = ", fahrenheit

END
```

CODE :

```
#include <stdio.h>

int main() {
    float celsius, fahrenheit;

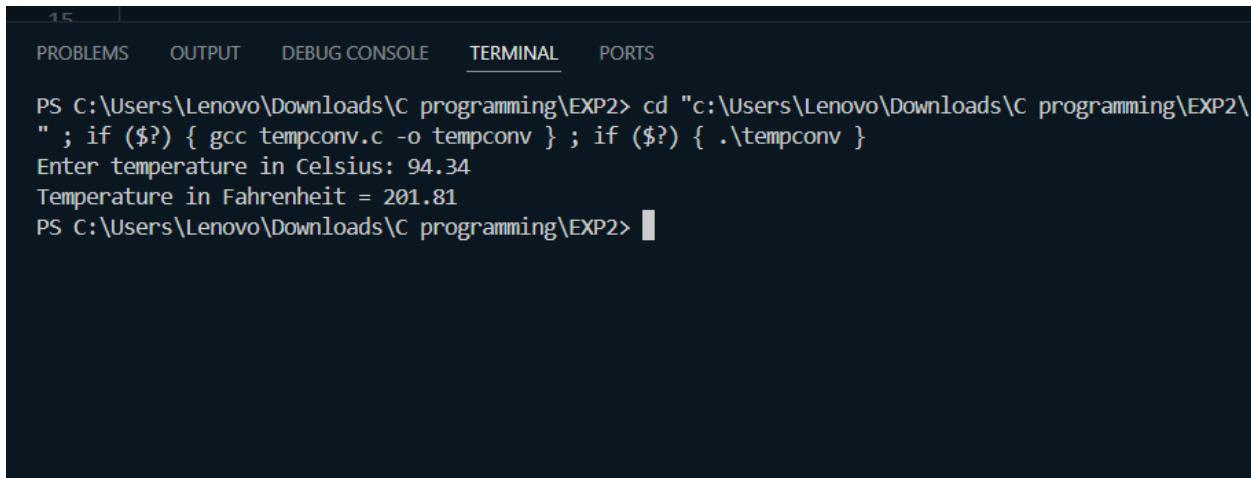
    printf("Enter temperature in Celsius: ");
    scanf("%f", &celsius);

    fahrenheit = (celsius * 9 / 5) + 32;

    printf("Temperature in Fahrenheit = %.2f\n", fahrenheit);

    return 0;
}
```

OUTPUT :



The screenshot shows a terminal window with the following interface elements:

- Top bar: PROBLEMS, OUTPUT, DEBUG CONSOLE, TERMINAL (underlined), PORTS.
- Text area:

```
PS C:\Users\Lenovo\Downloads\C programming\EXP2> cd "c:\Users\Lenovo\Downloads\C programming\EXP2\" ; if (?) { gcc tempconv.c -o tempconv } ; if (?) { .\tempconv }
Enter temperature in Celsius: 94.34
Temperature in Fahrenheit = 201.81
PS C:\Users\Lenovo\Downloads\C programming\EXP2>
```