



Practical File of

Programming in C

Course Code: CSEG1041

School Of Computer Science

Submitted By

Submitted To

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Course: BCA

Semester: 1

Batch: B5

Academic Year : 2025-26

Experiment 2: Operators

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

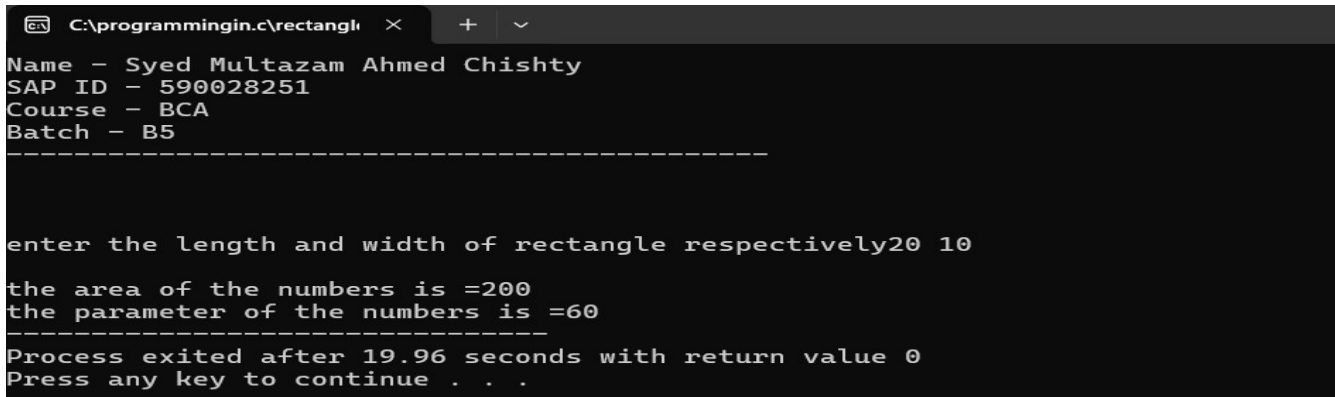
SOURCE CODE: -

// write a program to calculate the are and perimeter of a rectangle based on its length and width

```
#include<stdio.h>
int main()
{
    printf("Name - Syed Multazam Ahmed Chishty\nSAP ID - 590028251\nCourse - BCA\nBatch - B5");
    printf("\n-----\n");

    int length1,width1,area1;
    int parameter1;
    printf("\n\n\enter the length and width of rectangle respectively");
    scanf("%d%d",&length1,&width1);
    area1=(length1*width1);
    parameter1=2*(length1+width1);
    printf("\nthe area of the numbers is =%d",area1);
    printf("\nthe parameter of the numbers is =%d",parameter1);
    return 0;
}
```

EXECUTION: -

A screenshot of a Windows command prompt window titled "C:\programmingin.c\rectangl". The output of the program is displayed in white text on a black background. It shows the user's name, SAP ID, course, and batch, followed by a separator line. Then, it prompts for the length and width of a rectangle, with the user entering "20 10". The program then calculates and displays the area (200) and the perimeter (60). Finally, it shows the process exit time and a prompt to press any key to continue.

```
C:\programmingin.c\rectangl  x  +  v
Name - Syed Multazam Ahmed Chishty
SAP ID - 590028251
Course - BCA
Batch - B5
-----

enter the length and width of rectangle respectively20 10

the area of the numbers is =200
the parameter of the numbers is =60
-----
Process exited after 19.96 seconds with return value 0
Press any key to continue . . .
```

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

SOURCE CODE: -

```
#include<stdio.h>

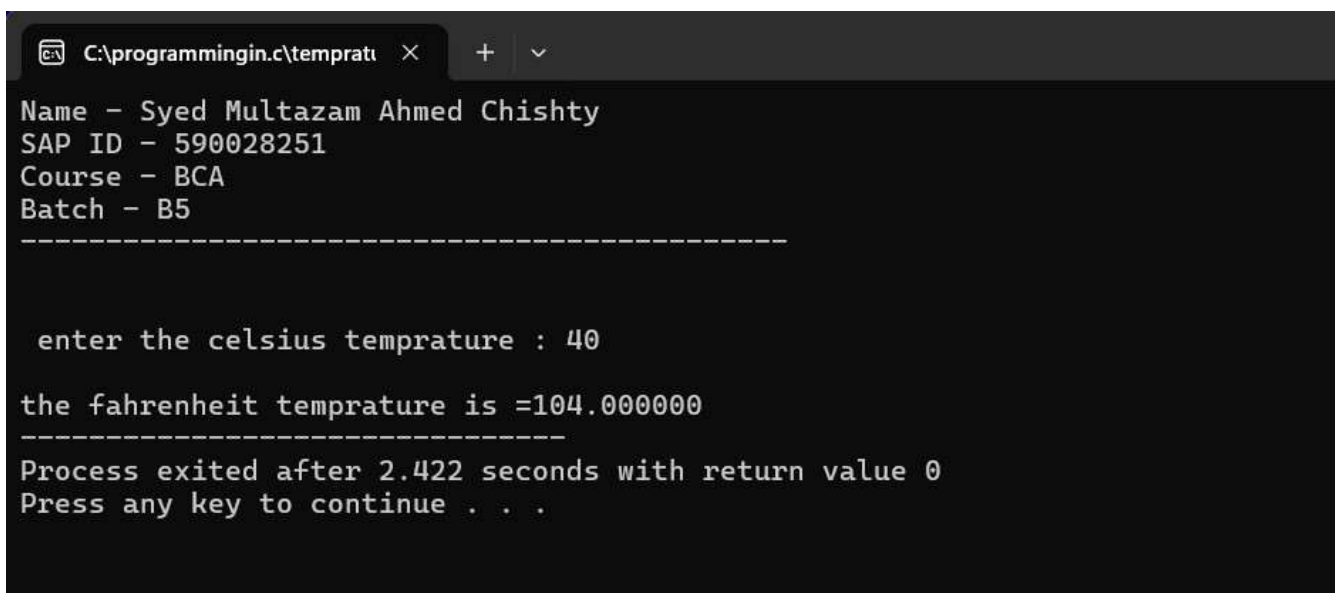
// WAP a C program to Convert temperature from Celsius to Fahrenheit using the
formula:  $F = (C * 9/5) + 32$ .

int main()
{
    printf("Name - Syed Multazam Ahmed Chishty\nSAP ID - 590028251\nCourse -
BCA\nBatch - B5");
    printf("\n-----\n");

    double celsius,fahrenheit;
    printf("\n\n enter the celsius temprature : ");
    scanf("%lf",&celsius);
    fahrenheit=(celsius*(9.0/5.0))+32;
    printf("\nthe fahrenheit temprature is =%lf",fahrenheit);
    return 0;

}
```

EXECUTION: -

A screenshot of a Windows command prompt window showing the execution of a C program. The window title is "C:\programmingin.c\temprati". The output of the program is displayed in a monospaced font. It first prints the user's details: "Name - Syed Multazam Ahmed Chishty", "SAP ID - 590028251", "Course - BCA", and "Batch - B5", followed by a dashed line. Then it prompts "enter the celsius temprature : 40". The program then outputs "the fahrenheit temprature is =104.000000", followed by another dashed line. At the bottom, it shows "Process exited after 2.422 seconds with return value 0" and "Press any key to continue . . .".

```
C:\programmingin.c\temprati  X  +  v

Name - Syed Multazam Ahmed Chishty
SAP ID - 590028251
Course - BCA
Batch - B5
-----

enter the celsius temprature : 40

the fahrenheit temprature is =104.000000
-----
Process exited after 2.422 seconds with return value 0
Press any key to continue . . .
```

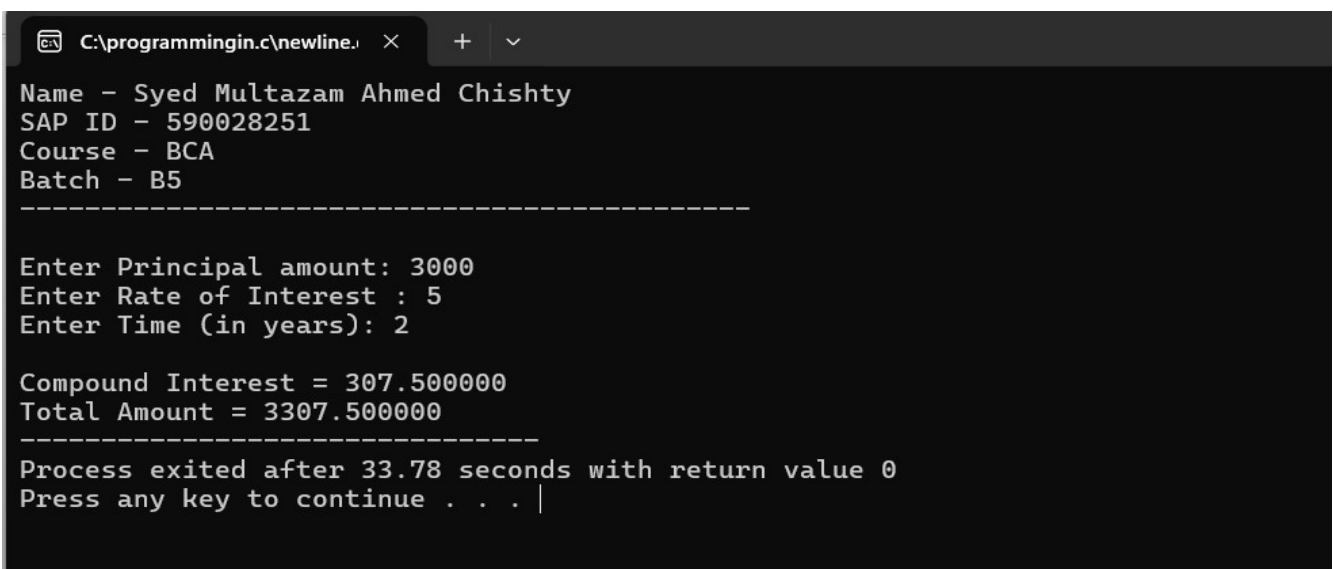
3. Write a program to calculate Compound Interest.

SOURCE CODE: -

```
// WAP to calculate compound interest
#include<stdio.h>
#include <math.h>
int main()
{ printf("Name - Syed Multazam Ahmed Chishty\nSAP ID - 590028251\nCourse -
BCA\nBatch - B5");
    printf("\n-----\n");

    double principal, rate, time, amount, ci;
    printf("\nEnter Principal amount: ");
    scanf("%lf", &principal);
    printf("Enter Rate of Interest : ");
    scanf("%lf", &rate);
    printf("Enter Time (in years): ");
    scanf("%lf", &time);
    amount = principal*pow((1+(rate/100)),time);
    ci = amount-principal;
    printf("\nCompound Interest = %lf", ci);
    printf("\nTotal Amount = %lf", amount);
    return 0;
}
```

EXECUTION: -

A screenshot of a Windows command prompt window with a dark background. The title bar shows the file path 'C:\programmingin.c\newline.' and standard window controls. The program's output is displayed in white text. It starts with a header containing the user's name, SAP ID, course, and batch, followed by a separator line. Then, it prompts for and receives input for principal amount (3000), rate of interest (5), and time (2). The results show a compound interest of 307.500000 and a total amount of 3307.500000, followed by another separator line. The window concludes with the message 'Process exited after 33.78 seconds with return value 0' and a prompt to press any key to continue.

```
C:\programmingin.c\newline.  X  +  v
Name - Syed Multazam Ahmed Chishty
SAP ID - 590028251
Course - BCA
Batch - B5
-----

Enter Principal amount: 3000
Enter Rate of Interest : 5
Enter Time (in years): 2

Compound Interest = 307.500000
Total Amount = 3307.500000
-----
Process exited after 33.78 seconds with return value 0
Press any key to continue . . . |
```

4.. Write a c program to find the roots of the quadratic equation without if else ladder?

SOURCE CODE: -

```
//write a c program to find the roots of the quadratic equation?
```

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

```
#include<math.h>
```

```
int main()
```

```
{ printf("Name - Syed Multazam Ahmed Chishty\nSAP ID - 590028251\nCourse -  
BCA\nBatch - B5");
```

```
printf("\n-----\n");
```

```
double a,b,c,x1,x2,discriminant;
```

```
printf("NOTE: THE VALUE OF A SHOULD NOT BE 0\n IF THE ANSWER  
RETURNS A NAN VALUE THAT MEANS NO REAL ROOTS\nenter the values of A B  
C respectively : ");
```

```
scanf("%lf %lf %lf",&a,&b,&c);
```

```
//printf("%dpow(x,2) %dx %d",a,b,c);
```

```
discriminant=pow(b,2)-4*a*c;
```

```
x1=(-b+sqrt(discriminant))/(2*a);
```

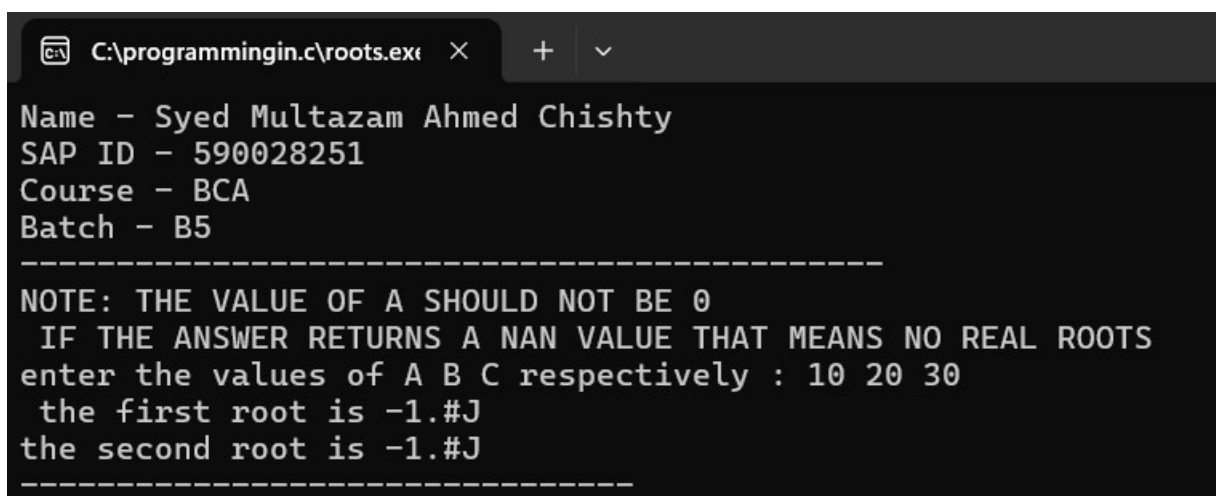
```
x2=(-b-sqrt(discriminant))/(2*a);
```

```
printf(" the first root is %.2lf\n",x1);
```

```
printf("the second root is %.2lf",x2);
```

```
}
```

EXECUTION: -



```
C:\programmingin.c\roots.exe X + v  
Name - Syed Multazam Ahmed Chishty  
SAP ID - 590028251  
Course - BCA  
Batch - B5  
-----  
NOTE: THE VALUE OF A SHOULD NOT BE 0  
IF THE ANSWER RETURNS A NAN VALUE THAT MEANS NO REAL ROOTS  
enter the values of A B C respectively : 10 20 30  
the first root is -1.#J  
the second root is -1.#J  
-----
```