



Practical File of  
**Programming in C**  
Course Code: CSEG1041  
School Of Computer Science

Submitted By

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Course: BCA

Semester: 1

Batch: B5

Academic Year : 2025-26

Submitted To

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## 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\nenter 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: -

```
C:\programmingin.c\rectangle > + ∨
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:  $F = (C * 9/5) + 32$ .

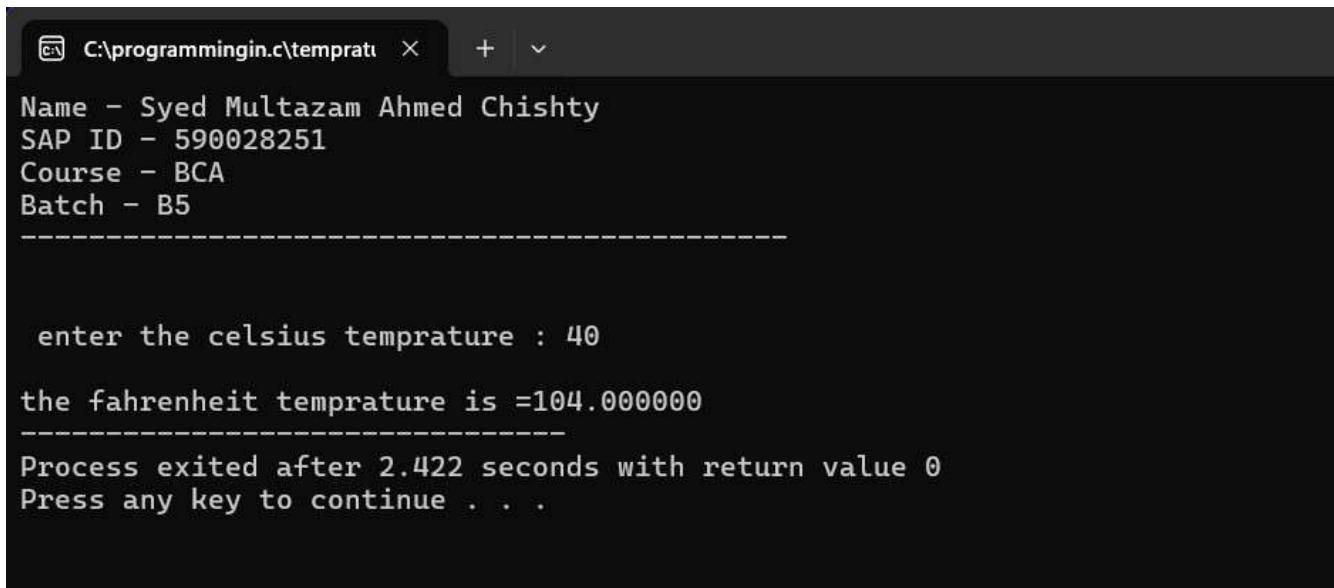
SOURCE CODE: -

```
#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: -



```
C:\programmingin.c\tempratu + ▾
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 . . .
```

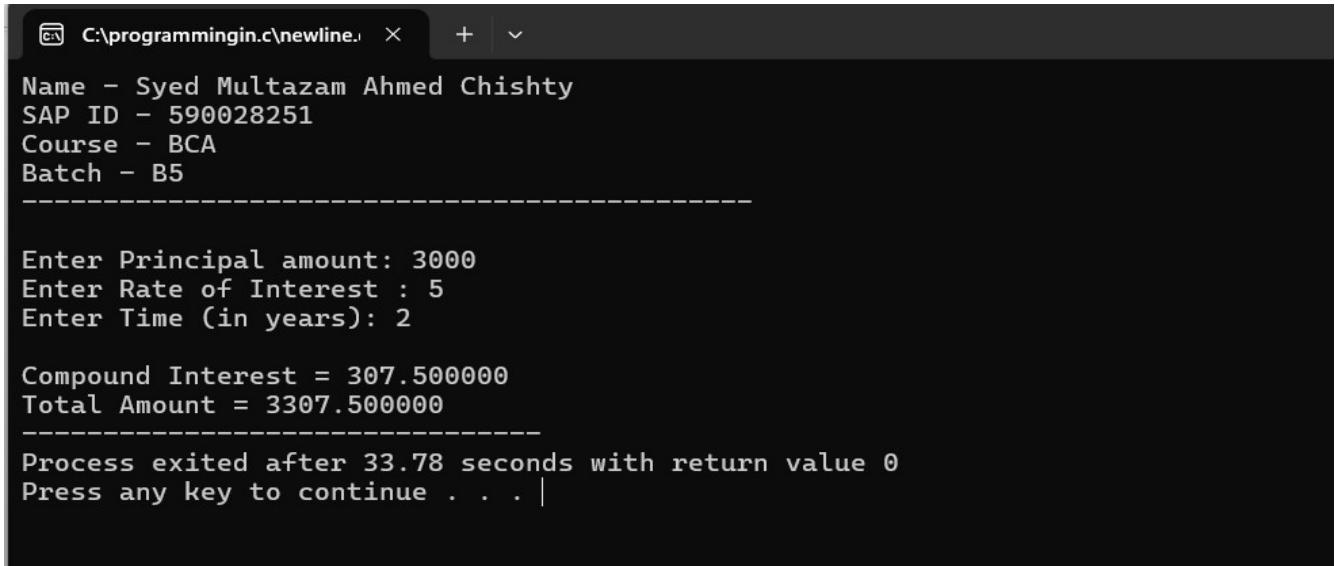
3. Write a program to calculate Compound Interest.

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: -



The screenshot shows a terminal window with the following output:

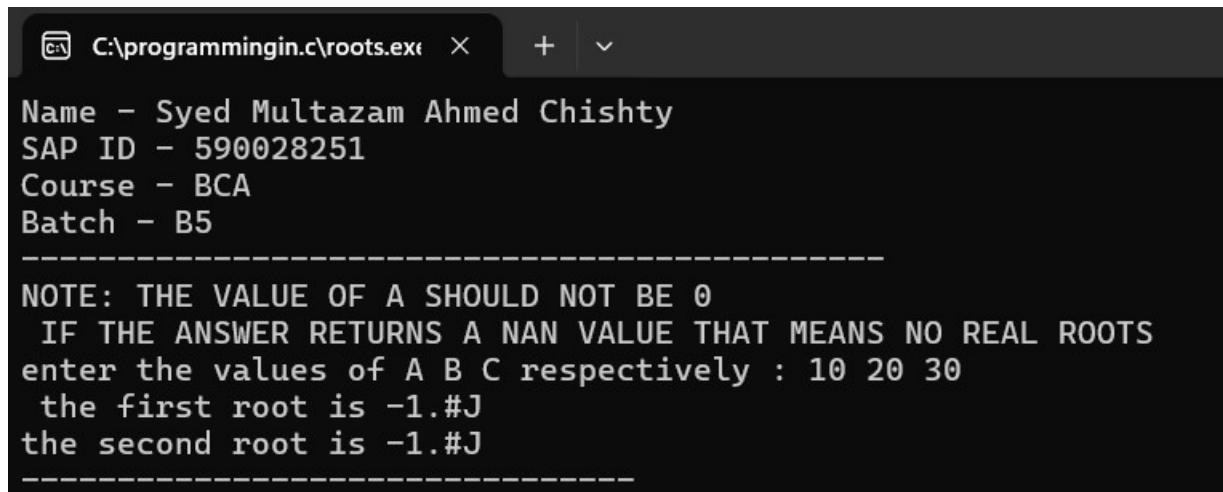
```
C:\programmingin.c\newline. x + v
Name - Syed Multazam Ahmed Chishty
SAP ID - 590028251
Course - BCA
Batch - B5
-----
Enter Principal amount: 3000
Enter Rate of Interest : 5
Enter Time (in years): 2
Compound Interest = 307.500000
Total Amount = 3307.500000
-----
Process exited after 33.78 seconds 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("%d pow(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 +   
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  
-----
```