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Experiment: 1

Aim: Write a program to print student detail (Name, Roll No, Branch and Department)

Software: Dev C++

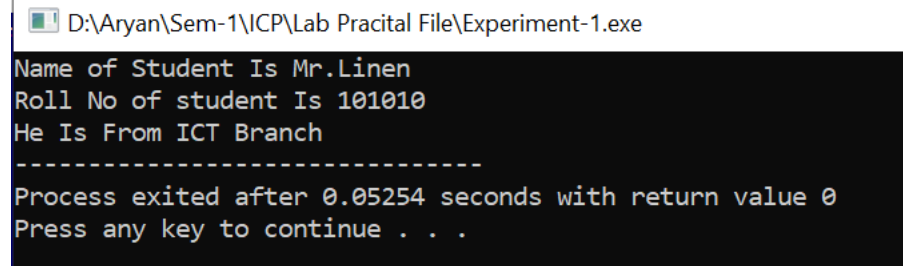
Code:

```
#include<stdio.h>

int main(void)
{
    printf("Name of Student Is Mr.Linen\n");
    printf("Roll No of student Is 101010\n");
    printf("He Is From ICT Branch");

    return 0;
}
```

Output:



```
D:\Aryan\Sem-1\ICP\Lab Pracital File\Experiment-1.exe
Name of Student Is Mr.Linen
Roll No of student Is 101010
He Is From ICT Branch
-----
Process exited after 0.05254 seconds with return value 0
Press any key to continue . . .
```

Student Name:- Aryan Dilipbhai Langhanoja
Roll_No_:- 92200133030



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Experiment: 2

Aim: Write a program to calculate simple interest.

Software: Dev C++

Code:

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

int main()
{
    double p,r,n,i;

    printf("Enter The Principle Value:-");
    scanf("%lf",&p);

    printf("Enter The Rate Of Interest:-");
    scanf("%lf",&r);

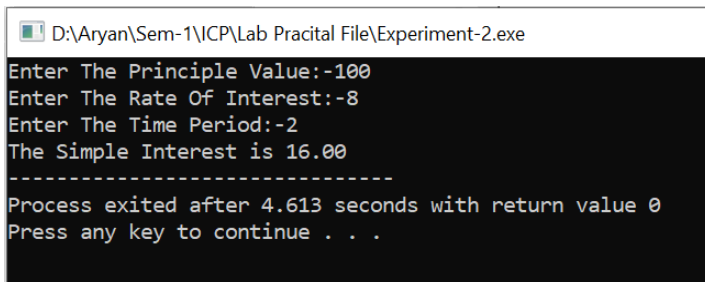
    printf("Enter The Time Period:-");
    scanf("%lf",&n);

    i=p*r*n/100;

    printf("The Simple Interest is %.2lf",i);

    return 0;
}
```

Output:



```
D:\Aryan\Sem-1\ICP\Lab Pracital File\Experiment-2.exe
Enter The Principle Value:-100
Enter The Rate Of Interest:-8
Enter The Time Period:-2
The Simple Interest is 16.00
-----
Process exited after 4.613 seconds with return value 0
Press any key to continue . . .
```

Student Name:- Aryan Dilipbhai Langhanoja
Roll_No_- 92200133030



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Experiment: 3

Aim: Write a program that accepts centigrade and convert it into Fahrenheit

Software: Dev C++

Code:-

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

int main()
{
    float centigrade,Fahrenheit;

    printf("Enter The Temperature In Centigrade:-");
    scanf("%f",&centigrade);

    Fahrenheit = 1.8 * (centigrade) + 32 ;

    printf("The Temperature In Fahrenheit Is %.2f",Fahrenheit);

    return 0;
}
```

Output:

```
D:\Aryan\Sem-1\ICP\Lab Pracital File\Experiment-3.exe
Enter The Temperature In Centigrade:-100
The Temperature In Fahrenheit Is 212.00
-----
Process exited after 1.975 seconds with return value 0
Press any key to continue . . .
```

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Experiment: 4

Aim: Write a program that accepts two numbers in A and B interchange value of A and B variable..

Software: Dev C++

Code:-

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

int main()
{
    int A,B;

    printf("Enter The Value Of A:-");
    scanf("%d",&A);

    printf("Enter The Value Of B:-");
    scanf("%d",&B);

    printf("Before Swap\nA=%d\nB=%d\n",A,B);

    A=A+B;
    B=A-B;
    A=A-B;

    printf("After Swap\nA=%d\nB=%d\n",A,B);

    return 0;
}
```

Output:-

```
D:\Aryan\Sem-1\ICP\Lab Pracital File\Experiment-4.exe
Enter The Value Of A:-3
Enter The Value Of B:-4
Before Swap
A=3
B=4
After Swap
A=4
B=3
-----
Process exited after 2.201 seconds with return value 0
Press any key to continue . . .
```

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Experiment: 5

Aim:- Write a program that perform the following output for n rows

Software:- Dev C++

Code:-

```
#include<stdio.h>

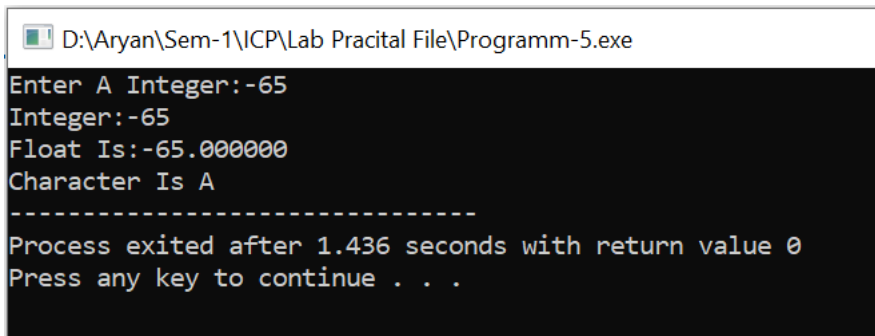
int main()
{
    int a;

    printf("Enter A Integer:-");
    scanf("%d",&a);

    printf("Integer:-%d\n",a);
    printf("Float Is:-%f\n",(float)a);
    printf("Character Is %c",a);

    return 0;
}
```

Output:-



```
D:\Aryan\Sem-1\ICP\Lab Pracital File\Programm-5.exe
Enter A Integer:-65
Integer:-65
Float Is:-65.000000
Character Is A
-----
Process exited after 1.436 seconds with return value 0
Press any key to continue . . .
```

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Experiment: 6

Aim :- Write a program to demonstrate the use of Arithmetic operators by getting two numbers from the user

Software:- Dev C++

Code:-

```
#include<stdio.h>

int main()
{
    int a,b;

    printf("Enter The First Value:-");
    scanf("%d",&a);

    printf("Enter The Second Value:-");
    scanf("%d",&b);

    printf("Addition Is %d\n",a+b);
    printf("Substraction Is %d\n",a-b);
    printf("Multiplication Is %d\n",a*b);
    printf("Division Is %d\n",a/b);
    printf("Modulo Is %d",a%b);

    return 0;
}
```

Output:-

```
D:\Aryan\Sem-1\ICP\Lab Pracital File\Programm-6.exe
Enter The First Value:-6
Enter The Second Value:-5
Addition Is 11
Substraction Is 1
Multiplication Is 30
Division Is 1
Modulo Is 1
-----
Process exited after 2.959 seconds with return value 0
Press any key to continue . . .
```

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Experiment: 7

Aim:- Write a program that accepts a number from keyboard and find whether the number is ODD or EVEN using Conditional operators.

Software:- Dev C++

Code:-

```
#include<stdio.h>

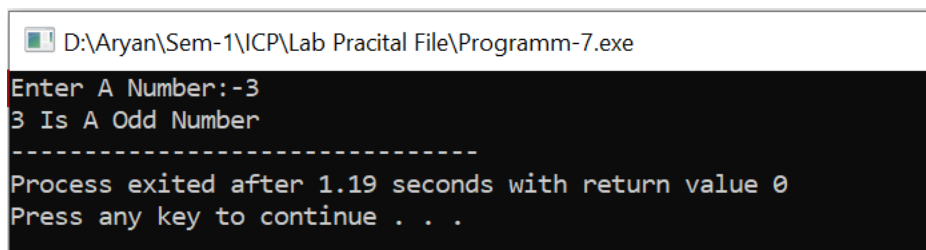
int main()
{
    int num;

    printf("Enter A Number:-");
    scanf("%d",&num);

    (num%2==0) ? printf("%d Is A Even Number",num) : printf("%d Is A Odd Number",num)
;

    return 0;
}
```

Output:-



```
D:\Aryan\Sem-1\ICP\Lab Pracital File\Programm-7.exe
Enter A Number:-3
3 Is A Odd Number
-----
Process exited after 1.19 seconds with return value 0
Press any key to continue . . .
```

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Experiment: 8

Aim Write a program to demonstrate the use of increment and decrement operator.

Software:- Dev C++

Code:-

```
#include<stdio.h>

int main()
{
    int a,num;

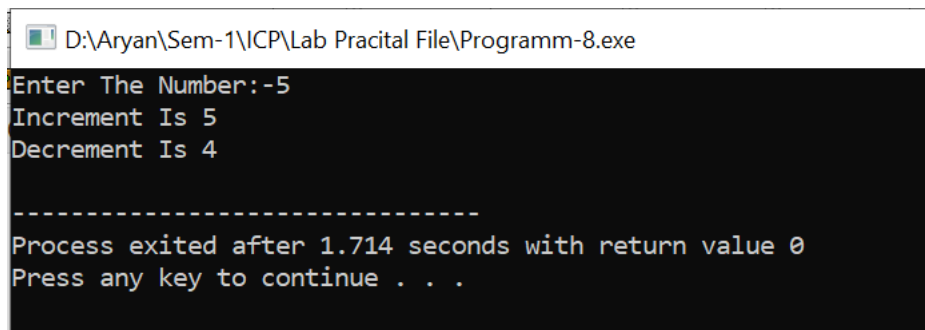
    printf("Enter The Number:-");
    scanf("%d",&a);

    num=a;

    printf("Increment Is %d\n",a++);
    printf("Decrement Is %d\n",--num);

    return 0;
}
```

Output:-



```
D:\Aryan\Sem-1\ICP\Lab Pracital File\Programm-8.exe
Enter The Number:-5
Increment Is 5
Decrement Is 4

-----
Process exited after 1.714 seconds with return value 0
Press any key to continue . . .
```

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Experiment: 9

Aim:- Write a program to demonstrate the use of shorthand operators.

Software:- Dev C++

Code:-

```
#include<stdio.h>

int main()
{
    int a,b;

    printf("Enter The First Value:-");
    scanf("%d",&a);

    printf("Enter The Second Value:-");
    scanf("%d",&b);

    printf("Or-Operator Is %d\n",a|=b);
    printf("And-Operator Is %d\n",a&=b);
    printf("Xor-Operator Is %d\n",a^=b);
    printf("Left Shift-Operator Is %d\n",a<<=b);
    printf("Right-Operator Is %d\n",a>>=b);

    return 0;
}
```

Output:-

```
D:\Aryan\Sem-1\ICP\Lab Pratical File\Programm-9.exe
Enter The First Value:-4
Enter The Second Value:-2
Or-Operator Is 6
And-Operator Is 2
Xor-Operator Is 0
Left Shift-Operator Is 0
Right-Operator Is 0

-----
Process exited after 2.755 seconds with return value 0
Press any key to continue . . . _
```

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Experiment: 10

Aim:- Write a program to demonstrate the use of sizeof() of operator.

Software:- Dev C++

Code:-

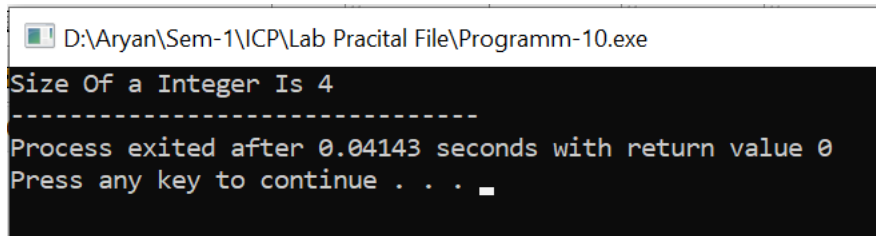
```
#include<stdio.h>

int main()
{
    int a;

    printf("Size Of a Integer Is %d",sizeof(a));

    return 0;
}
```

Output:-



```
D:\Aryan\Sem-1\ICP\Lab Pracital File\Programm-10.exe
Size Of a Integer Is 4
-----
Process exited after 0.04143 seconds with return value 0
Press any key to continue . . .
```

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Experiment: 11

Aim: Write a program to demonstrate the use of bitwise operators.

Software: Dev C++

Code:

```
#include<stdio.h>

int main()
{
    int a,b;

    printf("Enter The Number-1:-");
    scanf("%d",&a);

    printf("Enter The Number-2:-");
    scanf("%d",&b);

    printf("The Bit-wise Or Operator Is %d\n",a|b);
    printf("The Bit-wise And Operator Is %d\n",a&b);
    printf("The Bit-wise xor Operator Is %d\n",a^b);

    return 0;
}
```

Output:

```
D:\Aryan\Sem-1\ICP\Lab Pracital File\Programm-11.exe
Enter The Number-1:-4
Enter The Number-2:-2
The Bit-wise Or Operator Is 6
The Bit-wise And Operator Is 0
The Bit-wise xor Operator Is 6
-----
Process exited after 3.768 seconds with return value 0
Press any key to continue . . .
```

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Experiment: 12

Aim: Write a program to find out the average of three numbers.

Software: Dev C++

Code:

```
#include<stdio.h>

int main()
{
    int num,sum=0;

    for(int i=1;i<=3;i++)
    {
        printf("Enter The Number-%d:-",i);
        scanf("%d",&num);

        sum=sum+num;
    }

    printf("The Sum Of All Three Numbers are %d\n",sum);
    printf("The Average Of All Three Numbers are %d\n",sum/3);

    return 0;
}
```

Output:

```
D:\Aryan\Sem-1\ICP\Lab Pracital File\Programm-12.exe
Enter The Number-1:-1
Enter The Number-2:-2
Enter The Number-3:-3
The Sum Of All Three Numbers are 6
The Average Of All Three Numbers are 2

-----
Process exited after 2.592 seconds with return value 0
Press any key to continue . . .
```

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Experiment: 13

Aim: Write a program to calculate the gross salary of a person if the user enters the basic salary. Dearness Allowance (DA) should be 50 percent of basic salary, and House Rent Allowance (HRA) is 10 percent of basic salary.

Software: Dev C++

Code:-

```
#include<stdio.h>


int main()
{
    int base_salary;

    printf("Enter Your Base Salary:-");
    scanf("%d",&base_salary);

    printf("Your Base salary Is %d\n",base_salary);
    printf("Your Dearness Allowance Is %.2f\n",0.5*base_salary);
    printf("Your House Rent Allowance Is %.2f\n",0.1*base_salary);
    printf("\n\n");
    printf("Your Total Salary Is %.2f\n",1.6*base_salary);

    return 0;
}
```

Output:

 D:\Aryan\Sem-1\ICP\Lab Pracital File\Programm-13.exe

```
Enter Your Base Salary:-50000
Your Base salary Is 50000
Your Dearness Allowance Is 25000.00
Your House Rent Allowance Is 5000.00
```

```
Your Total Salary Is 80000.00
```

```
-----
Process exited after 2.339 seconds with return value 0
Press any key to continue . . .
```

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Experiment: 14

Aim: Write down a program to calculate the compound interest

Software: Dev C++

Code:-

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

int main()
{
    double principle_amount,rate_of_interest,compound_interest;
    int no_of_years;

    printf("Enter Your Principle Amount:-");
    scanf("%lf",&principle_amount);

    printf("Enter Your Rate Of Interest:-");
    scanf("%lf",&rate_of_interest);

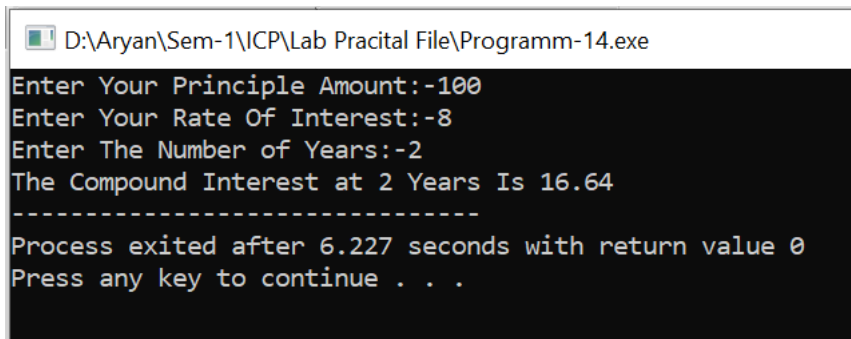
    printf("Enter The Number of Years:-");
    scanf("%d",&no_of_years);

    compound_interest=principle_amount*pow((1+(rate_of_interest/100)),no_of_years)-
principle_amount;

    printf("The Compound Interest at %d Years Is %.2lf",no_of_years,compound_interest);

    return 0;
```

} Output:-



```
D:\Aryan\Sem-1\ICP\Lab Pracital File\Programm-14.exe
Enter Your Principle Amount:-100
Enter Your Rate Of Interest:-8
Enter The Number of Years:-2
The Compound Interest at 2 Years Is 16.64
-----
Process exited after 6.227 seconds with return value 0
Press any key to continue . . .
```

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Experiment: 15

Aim:- Write a program that accepts three numbers from the user and print maximum of them.

Software:- Dev C++

Code:-

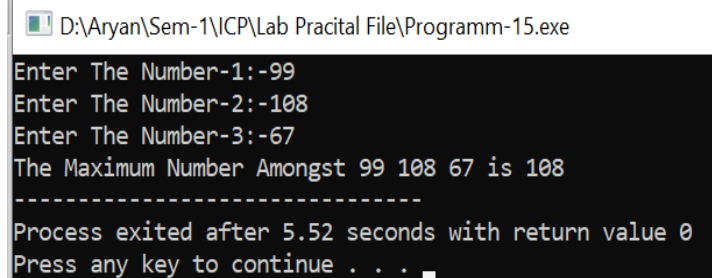
```
#include<stdio.h>
int main()
{
    int a,b,c,max;
    printf("Enter The Three Numbers:-");
    scanf("%d %d %d",&a,&b,&c);

    if(a>b)
    {
        if(a>c)
            max=a;
        else
            max=c;
    }

    else
    {
        if(b>c)
            max=b;
        else
            max=c;
    }

    printf("The Maximum Number Amongst %d %d %d is %d",a,b,c,max);
    return 0;}
```

Output:-



```
D:\Aryan\Sem-1\ICP\Lab Pracital File\Programm-15.exe
Enter The Number-1:-99
Enter The Number-2:-108
Enter The Number-3:-67
The Maximum Number Amongst 99 108 67 is 108
-----
Process exited after 5.52 seconds with return value 0
Press any key to continue . . .
```

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Experiment: 16

Aim :- Write a program that accepts two numbers and one code (1,2,3,4) from the user. According to the code, the operations to be performed, using switch case statements as follows: (Code: 1→ Addition, 2→ Subtraction, 3→ Multiplication, 4→ Division).

Software:- Dev C++

Code:-

```
#include<stdio.h>

int main()
{
    int a,b,op;

    printf("Enter The First-Number:-");
    scanf("%d",&a);

    printf("Enter The Second-Number:-");
    scanf("%d",&b);

    printf("Enter The Operation:-");
    scanf("%d",&op);

    switch(op)
    {
        case 1:
        {
            printf("The Addition Is %d",a+b);
            break;
        }

        case 2:
        {
            printf("The Substraction Is %d",a-b);
            break;
        }

        case 3:
        {
            printf("The Multiplication Is %d",a*b);
```

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```
                break;
            }

        case 4:
        {
            printf("The Division Is %d",a/b);
            break;
        }
    }
}
```

Output:-

```
D:\Aryan\Sem-1\ICP\Lab Pracital File\Programm-16.exe
Enter The First-Number:-5
Enter The Second-Number:-4
Enter The Operation:-1
The Addition Is 9
-----
Process exited after 3.741 seconds with return value 0
Press any key to continue . . .
```



Experiment:17

Aim:- Write a program that reads the marks for five subjects of a student. Calculate and print the grade for the student [i.e. Grade A, B, C, D and F] using Else-If ladder.

Software:- Dev C++

Code:-

```
#include<stdio.h>

int main()
{
    int a,sum=0,avg=0;

    for(int i=1;i<=5;i++)
    {
        printf("Enter The Marks-%d:-",i);
        scanf("%d",&a);

        sum=sum+a;
    }

    avg=sum/5;

    if(avg>=90)
    {
        printf("Grade-A");
    }

    else if(avg>=80 && avg<90)
    {
        printf("Grade-B");
    }

    else if(avg>=70 && avg<80)
    {
        printf("Grade-C");
    }

    else if(avg>=60 && avg<70)
```

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```
{  
    printf("Grade-D");  
}  
  
else if(avg>=50 && avg<40)  
{  
    printf("Grade-E");  
}  
  
else if(avg>=33 && avg<40)  
{  
    printf("Grade-F");  
}  
  
else  
{  
    printf("FAIL");  
}  
  
return 0;  
  
}
```

Output:-

```
D:\Aryan\Sem-1\ICP\Lab Pracital File\Programm-17.exe  
Enter The Marks-1:-99  
Enter The Marks-2:-99  
Enter The Marks-3:-99  
Enter The Marks-4:-99  
Enter The Marks-5:-99  
Grade-A  
-----  
Process exited after 3.799 seconds with return value 0  
Press any key to continue . . .
```



Experiment: 18

Aim:- Write a program that do sum=1+3+5+..... N terms Print value of Sum..

Software:- Dev C++

Code:-

```
#include<stdio.h>

int main()
{
    int num,sum=0;

    printf("Enter The Value Of N:-");
    scanf("%d",&num);

    for(int i=1;i<=num;i++)
    {
        if(i%2 !=0)
        {
            sum=sum+i;
        }
    }

    printf("Addition Is %d",sum);

    return 0;
}
```

Output:-

```
D:\Aryan\Sem-1\ICP\Lab Pracital File\Programm-18.exe
Enter The Value Of N:-18
Addition Is 81
-----
Process exited after 2.723 seconds with return value 0
Press any key to continue . . .
```

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Experiment: 19

Aim:- Write a program to print the Fibonacci Series [i.e. 1,1,2,3,5,8,13...N terms].

Software:- Dev C++

Code:-

```
#include<stdio.h>

int main(void)
{
    int a=0,b=1,c,n;

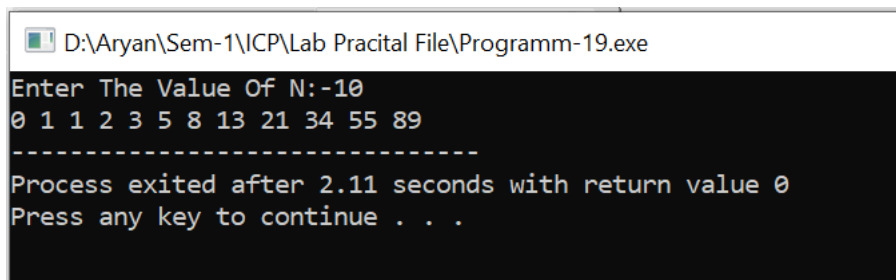
    printf("Enter The Value Of N:-");
    scanf("%d",&n);

    printf("%d %d ",a,b);

    for(int i=1;i<=n;i++)
    {
        c=a+b;
        a=b;
        b=c;
        printf("%d ",c);
    }

    return 0;
}
```

Output:-



```
D:\Aryan\Sem-1\ICP\Lab Pracital File\Programm-19.exe
Enter The Value Of N:-10
0 1 1 2 3 5 8 13 21 34 55 89
-----
Process exited after 2.11 seconds with return value 0
Press any key to continue . . .
```

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Experiment: 20

Aim:- Write a program that accepts a number from the user and print prime numbers from 0 to that number.

Software:- Dev C++

Code:-

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

```
int main()
{
    int n,j;

    printf("Enter The Value Of N:-");
    scanf("%d",&n);

    for(int i=0;i<=n;i++)
    {
        for(j=2;j<i;j++)
        {
            if(i%j==0)
            {
                break;
            }
        }

        if(i==j)
        {
            printf("%d ",j);
        }
    }

    return 0;
}
```

Output:-

D:\Aryan\Sem-1\ICP\Lab Pracital File\Programm-20.exe

```
Enter The Value Of N:-25
2 3 5 7 11 13 17 19 23
-----
Process exited after 5.537 seconds with return value 0
Press any key to continue . . .
```

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Experiment: 21

Aim: Write a program to accept 9 numbers in form of matrix and display in matrix form.

Software: Dev C++

Code:

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

```
int main()  
{
```

```
    int a[3][3];
```

```
    for(int i=0;i<3;i++)  
    {
```

```
        for(int j=0;j<3;j++)  
        {  
            printf("Enter The Value  
for a[%d][%d]:-",i+1,j+1);  
            scanf("%d",&a[i][j]);  
        }  
    }
```

```
    for(int i=0;i<3;i++)  
    {
```

```
        for(int j=0;j<3;j++)  
        {  
            printf("%d ",a[i][j]);  
        }  
        printf("\n");  
    }
```

```
}
```

Output: -

D:\Aryan\Sem-1\ICP\Lab Pracital File\Programm-21.exe

```
Enter The Value for a[1][1]:-1  
Enter The Value for a[1][2]:-2  
Enter The Value for a[1][3]:-3  
Enter The Value for a[2][1]:-4  
Enter The Value for a[2][2]:-5  
Enter The Value for a[2][3]:-6  
Enter The Value for a[3][1]:-7  
Enter The Value for a[3][2]:-8  
Enter The Value for a[3][3]:-9
```

```
1  2  3  
4  5  6  
7  8  9
```

```
-----  
Process exited after 4.705 seconds with return value 0  
Press any key to continue . . .
```



Experiment: 22

Aim: Write a program to accept 5 numbers in array and find maximum and minimum value of it.

Software: Dev C++

Code:

```
#include<stdio.h>

int main()
{
    int a[5],max,min;

    for(int i=0;i<5;i++)
    {
        printf("Enter The Value at Index-%d:-",i+1);
        scanf("%d",&a[i]);
    }

    max=a[0];
    min=a[0];

    for(int i=0;i<5;i++)
    {
        if(a[i]>max)
        {
            max=a[i];
        }
    }

    printf("The Maximum Number In Array %d\n",max);

    for(int i=0;i<5;i++)
    {
        if(a[i]<min)
        {
            min=a[i];
        }
    }
}
```




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```
printf("The Minmum Number In Array %d\n",min);
```

```
return 0;
```

```
}
```

Output:

```
D:\Aryan\Sem-1\ICP\Lab Pracital File\Programm-22.exe
Enter The Value at Index-1:-1
Enter The Value at Index-2:-2
Enter The Value at Index-3:-3
Enter The Value at Index-4:-4
Enter The Value at Index-5:-5
The Maximum Number In Array 5
The Minmum Number In Array 1

-----
Process exited after 3.144 seconds with return value 0
Press any key to continue . . .
```

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Experiment: 23

Aim: Write a program to count number of vowels in a given string.

Software: Dev C++

Code:-

```
#include<stdio.h>

int main()
{
    char s[15];
    int num,vowels=0;

    printf("Enter The String:-");
    gets(s);

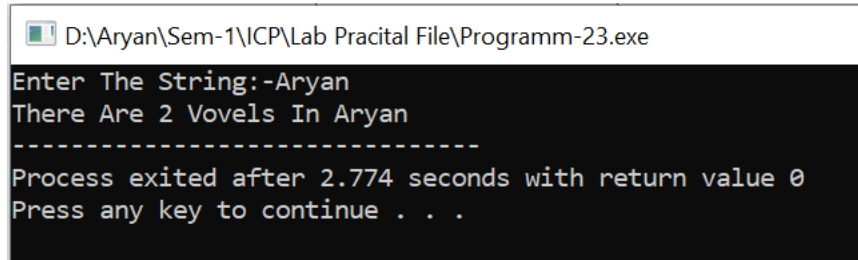
    num=strlen(s);

    for(int i=0;i<num;i++)
    {
        if(s[i]=='A' || s[i]=='E' || s[i]=='I' || s[i]=='O' || s[i]=='U' || s[i]=='a' || s[i]=='e' ||
s[i]=='i' || s[i]=='o' || s[i]=='u' )
        {
            vowels++;
        }
    }

    printf("There Are %d Vowels In %s",vowels,s);

    return 0;
}
```

Output:



```
D:\Aryan\Sem-1\ICP\Lab Pracital File\Programm-23.exe
Enter The String:-Aryan
There Are 2 Vowels In Aryan
-----
Process exited after 2.774 seconds with return value 0
Press any key to continue . . .
```

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Experiment: 24

Aim: Write a program to calculate Factorial using recursion in UDF

Software: Dev C++

Code:-

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

int fact(int num);
int main()
{
    int num;

    printf("Enter A Number:-");
    scanf("%d",&num);

    printf("%d ! = %d",num,fact(num));

    return 0;
}

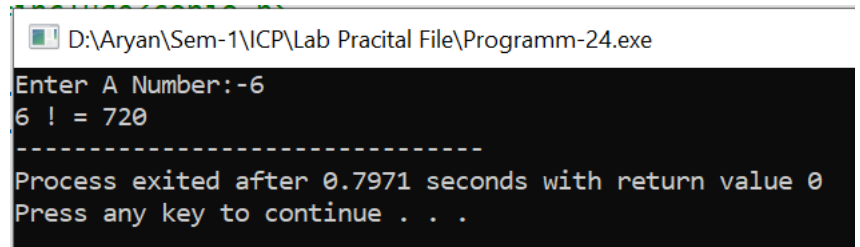
int fact(int num)
{
    int ans;

    if(num==1 || num==0)
    {
        ans=1;
    }

    else
    {
        ans=num*fact(num-1);
    }

    return ans;
}
```

Output:-



```
D:\Aryan\Sem-1\ICP\Lab Pracital File\Programm-24.exe
Enter A Number:-6
6 ! = 720
-----
Process exited after 0.7971 seconds with return value 0
Press any key to continue . . .
```

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Experiment: 25

Aim:- Write a program to find Average, maximum and minimum of Array elements using UDF.

Software:- Dev C++

Code:-

```
#include <stdio.h>

void find_avg_max_min(int arr[], int size, float *avg, int *max, int *min)
{
    int i;
    *max = arr[0];
    *min = arr[0];
    float sum = 0;

    for (i = 0; i < size; i++)
    {
        sum += arr[i];
        if (arr[i] > *max)
        {
            *max = arr[i];
        }

        if (arr[i] < *min)
        {
            *min = arr[i];
        }
    }
    *avg = sum / size;
}

int main()
{
```

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```
int arr[10], size, max, min;
float avg;

printf("Enter the size of the array: ");
scanf("%d", &size);

printf("Enter %d elements of the array: ", size);

for (int i = 0; i < size; i++)
{
    scanf("%d", &arr[i]);
}

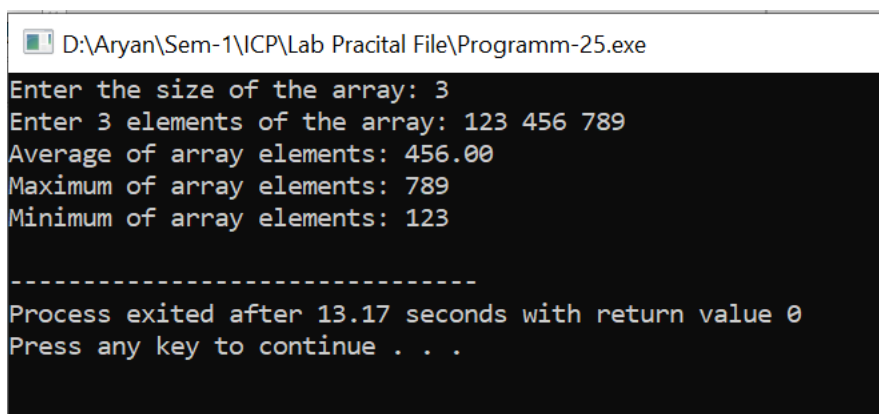
find_avg_max_min(arr, size, &avg, &max, &min);

printf("Average of array elements: %.2f\n", avg);
printf("Maximum of array elements: %d\n", max);
printf("Minimum of array elements: %d\n", min);

return 0;

}
```

Output:-



```
D:\Aryan\Sem-1\ICP\Lab Pracital File\Programm-25.exe
Enter the size of the array: 3
Enter 3 elements of the array: 123 456 789
Average of array elements: 456.00
Maximum of array elements: 789
Minimum of array elements: 123

-----
Process exited after 13.17 seconds with return value 0
Press any key to continue . . .
```



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Experiment: 26

Aim :- Write a C program to create a structure of employees with Full Name, Last Name, City and Salary. Display it for n employees

Software:- Dev C++

Code:-

```
#include<stdio.h>

struct employee_detail
{
    char first_name[10];
    char last_name[10];
    char city[15];
    int salary;
};

int main()
{
    int n;

    printf("Enter The Number Of Employee:-");
    scanf("%d",&n);

    struct employee_detail employee[n];

    for(int i=0;i<n;i++)
    {
        printf("Enter The First Name Of Employee-%d:-",i+1);
        scanf("%s",&employee[i].first_name);

        printf("Enter The Last Name Of Employee-%d:-",i+1);
        scanf("%s",&employee[i].last_name);

        printf("Enter The City Of Employee-%d:-",i+1);
        scanf("%s",&employee[i].city);
        fflush(stdin);

        printf("Enter The Salary Of Employee-%d:-",i+1);
```

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```
        scanf("%d",&employee[i].salary);
    }

    for(int i=0;i<n;i++)
    {
        printf("\n\n");
        printf("First Name:- %s\n",employee[i].first_name);
        printf("Last Name:- %s\n",employee[i].last_name);
        printf("City:-%s\n",employee[i].city);
        printf("Salary:-%d\n",employee[i].salary);
    }

    return 0;
}
```

Output:-

```
D:\Aryan\Sem-1\ICP\Lab Pracital File\Programm-26.exe
Enter The Number Of Employee:-2
Enter The First Name Of Employee-1:-Aryan
Enter The Last Name Of Employee-1:-Langhanoja
Enter The City Of Employee-1:-Ahmedabad
Enter The Salary Of Employee-1:-1000000000
Enter The First Name Of Employee-2:-Krish
Enter The Last Name Of Employee-2:-Mamtora
Enter The City Of Employee-2:-Rajkot
Enter The Salary Of Employee-2:-456789

First Name:- Aryan
Last Name:- LanghanojaAhmedabad
City:-Ahmedabad
Salary:-1000000000

First Name:- Krish
Last Name:- Mamtora
City:-Rajkot
Salary:-456789

-----
Process exited after 46.17 seconds with return value 0
Press any key to continue . . .
```

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Experiment:27

Aim:- Write a program to create array of structure. Make a structure for student having student_no, student_name, student_marks

Software:- Dev C++

Code:-

```
#include<stdio.h>

struct student_details
{
    char name[30];
    int marks;
    int no;
};

int main()
{
    int n;

    printf("Enter The Number Of Student:-");
    scanf("%d",&n);

    struct student_details student[n];

    for(int i=0;i<n;i++)
    {
        printf("Enter The Name Of Student-%d:-",i+1);
        scanf("%s",&student[i].name);

        printf("Enter The Marks Of Student-%d:-",i+1);
        scanf("%d",&student[i].marks);

        printf("Enter The Roll-no Of Student-%d:-",i+1);
        scanf("%d",&student[i].no);
    }

    for(int i=0;i<n;i++)
```

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```
{  
    printf("\n\n\n");  
    printf("The Name Of Student-%d:- %s\n",i+1,student[i].name);  
    printf("The Marks Of Student-%d:-%d\n",i+1,student[i].marks);  
    printf("The Roll-no Of Student-%d:-%d\n",i+1,student[i].no);  
}  
}
```

Output:-

```
D:\Aryan\Sem-1\ICP\Lab Pracital File\Programm-27.exe  
Enter The Number Of Student:-2  
Enter The Name Of Student-1:-Aryan  
Enter The Marks Of Student-1:-100  
Enter The Roll-no Of Student-1:-30  
Enter The Name Of Student-2:-Krish  
Enter The Marks Of Student-2:-95  
Enter The Roll-no Of Student-2:-22  
  
The Name Of Student-1:- Aryan  
The Marks Of Student-1:-100  
The Roll-no Of Student-1:-30  
  
The Name Of Student-2:- Krish  
The Marks Of Student-2:-95  
The Roll-no Of Student-2:-22
```

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Experiment: 28

Aim:- Write a program to create union cricketer having player_name, batting_avg, player_age.P for swapping of two values with help of UDF and call by reference

Software:- Dev C++

Code:-

```
#include<stdio.h>

union cricketer
{
    float batting_avg;
    int player_age;
};

union cricker_name
{
    char player_name[50];
};

void swap (float *a,float *b)
{
    float temp;

    temp=*a;
    *a=*b;
    *b=temp;

    printf("After Swap:-\n");
    printf("Average Of Player-1=%.2f\nAverage Of Player-2=%.2f",*a,*b);
}

int main()
{
    int n;

    printf("Enter The Number Of Players:-");
    scanf("%d",&n);
```

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```
union cricketer player[n];
union cricker_name name[n];
float avg[n];

for(int j=0;j<n;j++)
{
    printf("Enter The Name Of Player-%d:-",j+1);
    scanf("%s",&name[j].player_name);
}

for(int i=0;i<n;i++)
{

    printf("Enter The Batting Average Of Player-%d:-",i+1);
    scanf("%f",&player[i].batting_avg);
    avg[i]=player[i].batting_avg;

    printf("Enter The Age Of Player-%d:-",i+1);
    scanf("%d",&player[i].player_age);

    printf("\n\n");

}

printf("Before Swap:-\n");
for(int k=0;k<n;k++)
{
    printf("The Name Of Player-%d Is %s\n",k+1,name[k].player_name);
    printf("The Batting Average Of Player-%d Is %.2f\n",k+1,avg[k]);
    printf("The Age Of Player-%d Is %d\n",k+1,player[k].player_age);
}

swap(&avg[0],&avg[1]);

}
```



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Output:-

```
D:\Aryan\Sem-1\ICP\Lab Pracital File\Programm-28.exe
Enter The Number Of Players:-2
Enter The Name Of Player-1:-Sachin
Enter The Name Of Player-2:-Virat
Enter The Batting Average Of Player-1:-56.78
Enter The Age Of Player-1:-56

Enter The Batting Average Of Player-2:-45.89
Enter The Age Of Player-2:-34

Before Swap:-
The Name Of Player-1 Is Sachin
The Batting Average Of Player-1 Is 56.78
The Age Of Player-1 Is 56
The Name Of Player-2 Is Virat
The Batting Average Of Player-2 Is 45.89
The Age Of Player-2 Is 34
After Swap:-
Average Of Player-1=45.89
Average Of Player-2=56.78
```

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Experiment: 29

Aim: Write a program to Display contents of a file on screen. Use functions (fopen, fclose, getc, putchar, eof)

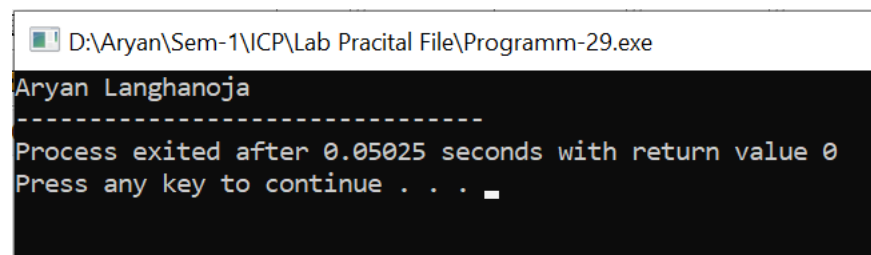
Software: Dev C++

Code:

```
#include<stdio.h>
#include<string.h>
#include<stdlib.h>
int main ()
{
    FILE *fptr;
    fptr=fopen("text.txt","r");
    char ch;
    char text[100];
    ch= fgetc(fptr);
    while(ch!=EOF)
    {
        printf("%c",ch);
        ch=fgetc(fptr);
    }

    fclose(fptr);
}
```

Output:



```
D:\Aryan\Sem-1\ICP\Lab Pracital File\Programm-29.exe
Aryan Langhanoja
-----
Process exited after 0.05025 seconds with return value 0
Press any key to continue . . .
```



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Experiment: 30

Aim: Write a program to count number of characters in a file.

Software: Dev C++

Code:

```
#include<stdio.h>
#include<string.h>
#include<stdlib.h>
int main ()
{
    int count =0;
    char ch;
    FILE *fptr;

    fptr=fopen("text.txt","r");
    ch=getc(fptr);
    if(fptr==NULL)
    {
        printf("Can't open file. Make sure file exists.\n");
        exit(1);
    }

    do
    {
        ch = fgetc(fptr);
        count++;
    }while(ch!=EOF);

    fclose(fptr);

    printf("amount of charcter in file :- %d",count);

    return 0;

}
```

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Output:

```
D:\Aryan\Sem-1\ICP\Lab Pracital File\Programm-30.exe
amount of charcter in file :- 16
-----
Process exited after 0.06083 seconds with return value 0
Press any key to continue . . .
```

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