

Software Development fundamentals-2 [EVEN 2022]

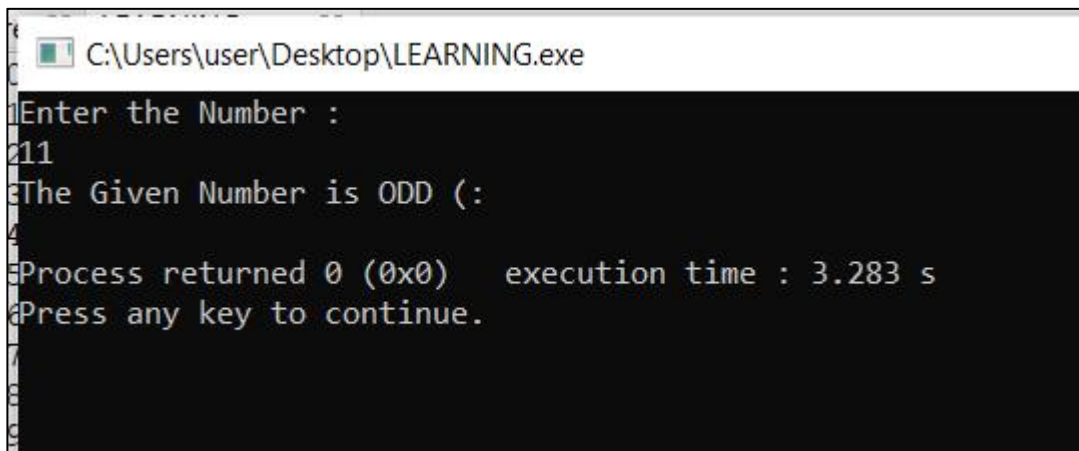
Tutorial Sheet -1

1. Write a C++ program to read a number and display it as even or odd number.

```
#include <iostream>
using namespace std;

int main()
{
    int a;
    cout <<"Enter the Number :"<<endl;
    cin>>a;

    if (a%2==0)
    {
        cout<<"The Given Number is EVEN :)"<<endl;
    }
    else
    {
        cout<<"The Given Number is ODD (:)"<<endl;
    }
    return 0;
}
```



```
C:\Users\user\Desktop\LEARNING.exe
Enter the Number :
11
The Given Number is ODD (:
Process returned 0 (0x0)   execution time : 3.283 s
Press any key to continue.
```

2. Write a C++ program to demonstrate various arithmetic operations.

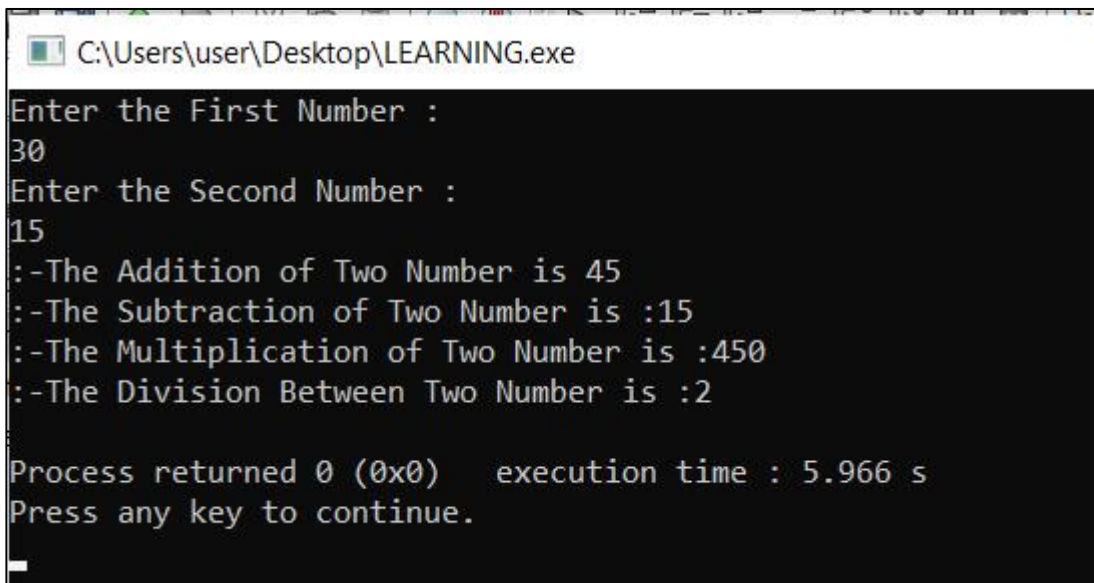
```
#include <iostream>
using namespace std;

int main()
{
    int a,b;
    cout<<"\n";
    cout <<"Enter the First Number : "<<endl;
    cin>>a;

    cout <<"Enter the Second Number : "<<endl;
    cin>>b;

    cout<<"-The Addition of Two Number is "<<a+b<<endl;
    cout<<"-The Subtraction of Two Number is : "<<a-b<<endl;
    cout<<"-The Multiplication of Two Number is : "<<a*b<<endl;
    cout<<"-The Division Between Two Number is : "<<a/b<<endl;

    return 0;
}
```



```
C:\Users\user\Desktop\LEARNING.exe
Enter the First Number :
30
Enter the Second Number :
15
:-The Addition of Two Number is 45
:-The Subtraction of Two Number is :15
:-The Multiplication of Two Number is :450
:-The Division Between Two Number is :2

Process returned 0 (0x0)   execution time : 5.966 s
Press any key to continue.
```

3. Write a C++ program to read two numbers x and y. Also display its quotient and remainder on dividing x by y.

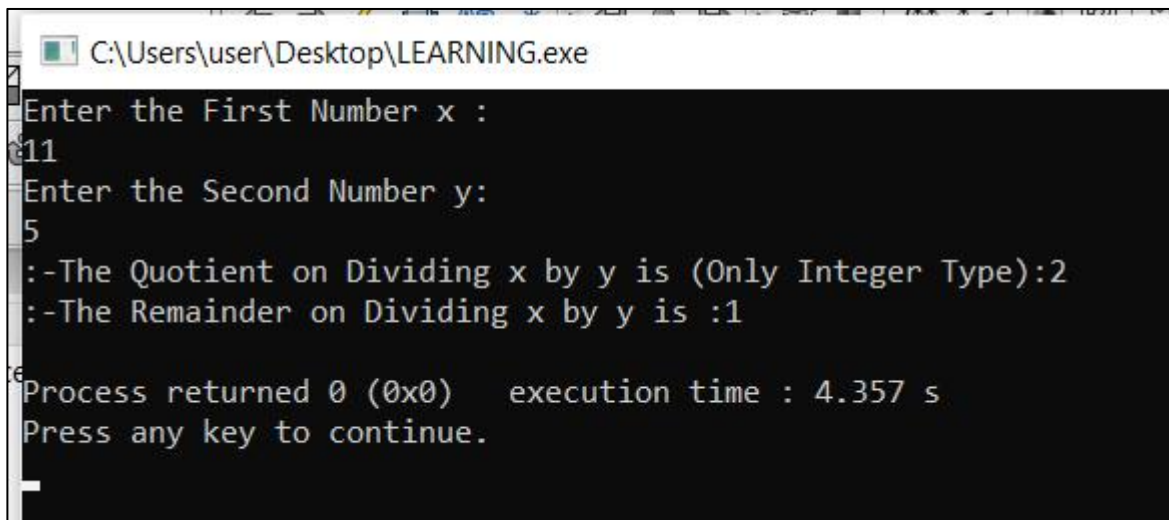
```
#include <iostream>
using namespace std;

int main()
{
    int x,y;
    cout << "Enter the First Number x : "<< endl;
    cin >> x;

    cout << "Enter the Second Number y: "<< endl;
    cin >> y;

    cout << "-The Quotient on Dividing x by y is (Only Integer Type): "<< x/y << endl;
    cout << "-The Remainder on Dividing x by y is : "<< x%y << endl;

    return 0;
}
```



```
C:\Users\user\Desktop\LEARNING.exe
Enter the First Number x :
11
Enter the Second Number y:
5
:-The Quotient on Dividing x by y is (Only Integer Type):2
:-The Remainder on Dividing x by y is :1
Process returned 0 (0x0)   execution time : 4.357 s
Press any key to continue.
```

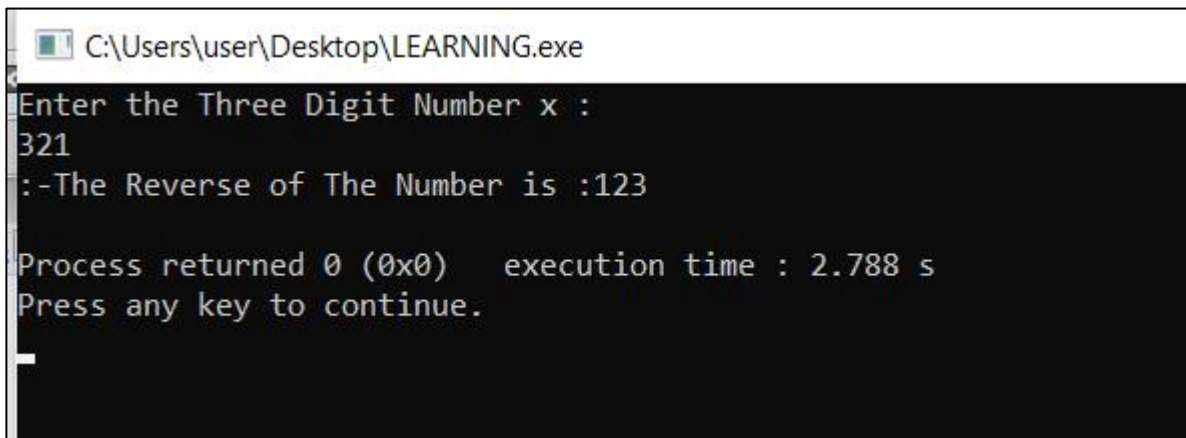
4. Write a C++ program to read a 3-digit number and reverse it.

```
#include <iostream>
using namespace std;

int main()
{
    int x,y,a,z,b;
    cout <<"Enter the Three Digit Number x :"<<endl;
    cin>>x;

    y=x%100;
    a=x/100;
    z=y%10;
    b=y/10;

    cout<<":-The Reverse of The Number is :"<<z<<b<<a<<endl;
    return 0;
}
```

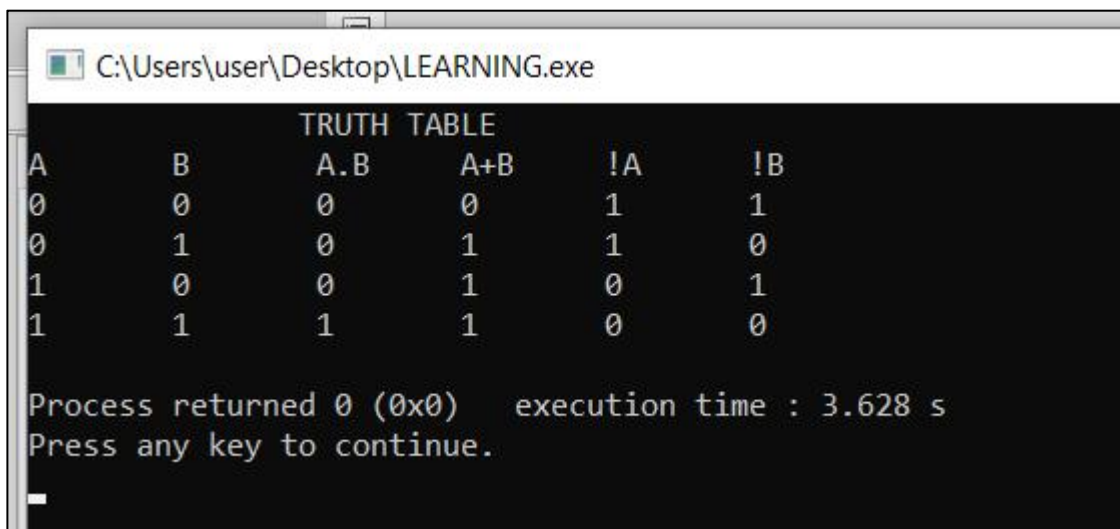


```
C:\Users\user\Desktop\LEARNING.exe
Enter the Three Digit Number x :
321
:-The Reverse of The Number is :123
Process returned 0 (0x0)   execution time : 2.788 s
Press any key to continue.
```

5. Write a C++ program to display truth table of AND, OR and NOT operators.

```
#include <iostream>
using namespace std;

int main()
{
    int a,b;
    cout << ("***** TRUTH TABLE *****") << endl;
    cout << ("\n");
    cout << ("A\tB\tA.B\tA+B\t!A\t!B") << endl;
    for(int i = 0; i<=3 ; i++)
    {
        a = i/2;
        b = i%2;
        cout << a << "\t" << b << "\t" << (a&&b) << "\t" << (a||b) << "\t" << !a
        << "\t" << !b << "\t" << endl;
    }
    return 0;
}
```



```
C:\Users\user\Desktop\LEARNING.exe

      TRUTH TABLE
A      B      A.B      A+B      !A      !B
0      0      0      0      1      1
0      1      0      1      1      0
1      0      0      1      0      1
1      1      1      1      0      0

Process returned 0 (0x0)   execution time : 3.628 s
Press any key to continue.
_
```

6. Write a C++ program to find the roots of a given quadratic expression.

```
#include <iostream>
#include<math.h>
using namespace std;

int main()
{
    int a,b,c,d;

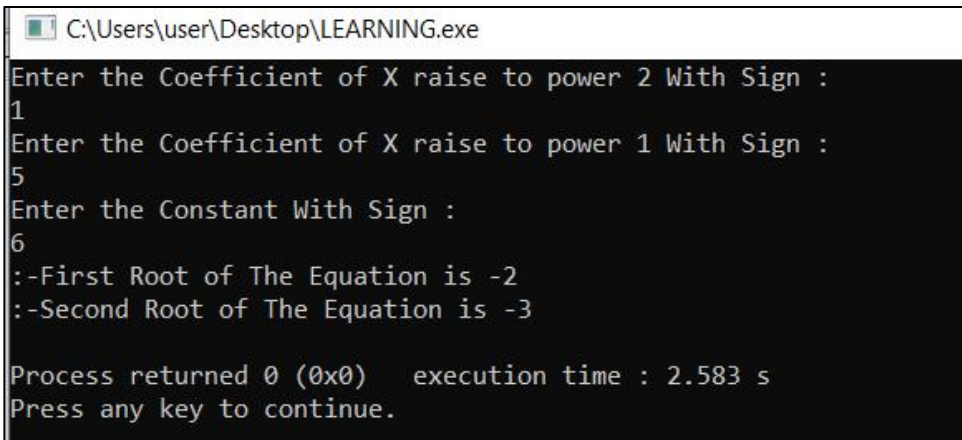
    cout <<"Enter the Coefficient of X raise to power 2 With Sign :"<<endl;
    cin>>a;

    cout << "Enter the Coefficient of X raise to power 1 With Sign :"<<endl;
    cin>>b;

    cout<< "Enter the Constant With Sign :"<<endl;
    cin>>c;
    d=pow(b*b- 4*a*c,0.5);

    cout<<":-First Root of The Equation is "<<(-b+d)/2*a<<endl;
    cout<<":-Second Root of The Equation is "<<(-b-d)/2*a<<endl;

    return 0;
}
```



```
C:\Users\user\Desktop\LEARNING.exe
Enter the Coefficient of X raise to power 2 With Sign :
1
Enter the Coefficient of X raise to power 1 With Sign :
5
Enter the Constant With Sign :
6
:-First Root of The Equation is -2
:-Second Root of The Equation is -3

Process returned 0 (0x0)   execution time : 2.583 s
Press any key to continue.
```

7. Write a C++ program to read a string and find the number of vowel.

```
#include <iostream>
using namespace std;

int main()
{
    int i,vowel=0;
    string word;

    cout<<"Enter the Word:";
    getline (cin,word);
    cout<<"Input string is:"<<word;

    for(i=0;word[i];i++)
    {
        If (word[i]=='a' || word[i]=='e' || word[i]=='i' || word[i]=='o' || word[i]=='u'
        || word[i]=='A' || word[i]=='E' || word[i]=='I' || word[i]=='O' || word[i]=='U')
        {
            vowel++;
        }
    }
    cout<<"\nThe number of vowels in the given string are:"<<vowel;
    return 0;
}
```

Name :- Rahi Agarwal
Enroll no :- B60605
Batch :- F8