OOP

LAB-2

Kidus Abebe

Roll no: 2106285

Branch: IT

Section: 03

①
```cpp
#include <iostream>
using namespace std;
int main()
{
    int a,b;
    cout << "Give two numbers to add" << endl;
    cin >> a >> b;
    int sum = a+b;
    cout << "Sum of " << a << " and " << b << " is " << sum;
    return 0;
}
```

output

Give two numbers to add
2 3
Sum of 2 and 3 is 5.

②
```cpp
#include <iostream>
using namespace std;
int main()
{
    float f,c;
    cout << "give temperature in farenheit \n";
    cin >> f;
    c = (f-32) * 5/9;
    cout << "The Temperature in centigrade is " << c;
    return 0;
}
```

output

Give a temperature in farenheit
32
The temperature in catigrade is 0.

③
```cpp
#include <iostream>
using namespace std;
int main ()
{
    int r;
    float a;
    Cout <<" Give a radius of a circle \n";
    Cin >> r;
    a = 3.14 * r * r;
    Cout z< " The area of your circle is " << a << endl;
    return 0;
}
```

<u>output</u>

Give a radius of a circle
10
The area of your circle is 314

④
```cpp
#include <iostream>
using namespace std;
int main()
{
    int h, b;
    float a;
    Cout <<" Give the height and base of your triangle respectively\n";
    Cin >> h >> b;
    a = 0.5* h * b;
    Cout << "The area of your circle is " << a << endl;
    return 0;
}
```

<u>output</u>
Give the height and base of your triangle respectively
2 10
The area of your circle is 10

```cpp
⑤ #include <iostream>
using namespace std;
int main()
{
    int a,b,c;
    Cout << " Give two numbers \n";
    cin >> a >> b;
    Cout << " Values before swap are " << a << " and" << b << endl;

    c = a;
    a = b;
    b = c;
    Cout << " Values after swap are " << a << "and" << b << endl;

    return 0;
}
```

output

Give two numbers
1 2
Values before swap are 1 and 2
Values after swap are 2 and 1.

```cpp
⑥ #include <iostream>
using namespace std;
int main()
{
    int a, b, largest;
    Cout << " Give two numbers \n";
    cin >> a >> b;
    largest = a>b ? a : b;
    Cout << " the largest of the two is " << largest;
    return 0;
}
```

output
Give two numbers
> 2 3
The largest of the two is 3.

```cpp
7    #include <iostreams>
     using namespace std;
     int main()
     {
         char alpha;
         Cout << " Please give an alphabet \n";
         Cin >> alpha;
         if ( :supper (alpha) ==1)
             Cout << alpha <<" is already uppercase \n";
         else
         {
             alpha = toupper(alpha);
             Cout << alpha;
         }
         return 0;
     }
```

output

Please give an alphabet

m

M

```cpp
8    #include <iostreams>
     #include <iomanip>
     using namespace std;
     int main ()
     {
         float a, b, operation, result;
         Cout << " please give two numbers \n";
         Cin >> a >> b;
         Cout <<" Choose the number associated with the operation you want to
         perform \n 1. Addition \n 2. subtraction \n 3. Multiplication \n 4. Division \n";
         Cin >> operation;
         if ( operation ==1)
         {
             result = a+b;
             Cout << "Result is " << result << endl;  }
```

```cpp
else if ( operation ==2)
{
        result = a - b;
        Cout << " Result is " << result << endl;
}
else if ( operation == 3)
{
     result = a * b;
     Cout << " Result is" << result << endl;
}
else if ( operation == 4)
{
     result = a / b;
     Cout << " Result is " << setprecision (4) << result << endl;
}
else
      cout << " Invalid   choice" << endl;

return 0;

}
```

output

Please give two numbers

2 3

Choose the number associated with your requirement

1. Addition

2. Subtraction

3. Multiplication

4. Division

1

Result is 5.

(9)
```cpp
#include <iostream>
using namespace std;
int main()
{
     int i;
     for(i=1; i<=20; i++)
     cout << i << " " << endl;
     return 0; }
```

Output   1
         2
         3
         4
         ....
         20

```cpp
(10) #include <iostream>
using namespace std;
int main()
{
    int start, end, i;
    cout << "Please give the range of numbers you want to see \n";
    cin >> start >> end
    for (i = start ; i <= end ; i++)
        cout << i << endl;
    return 0;
}
```

output

Please give the range of numbers you want to see

1 4

1
2
3
4

```cpp
(11) #include <iostream>
using namespace std;
int main()
{
    int n, temp, result = 1;
    cout << "Give a number" << endl;
    cin >> n;
    for (int i = n; i >= 1; i--)
        result *= 1
    cout << "The factorial of " << n << " is " << result << endl;
    return 0;
}
```

output

Give a number
5
The factorial of 5 is 120.

```
(12)  #include <iostream>
      using namespace std;
      int main()
      {
          int n, ram=0, sum=0;
          cout <<" Provide a number\n";
          cin >> n;
          while (n!=0)
          {
              ram = n % 10;
              n /=10;
              sum += ram;
          }
          cout <<" The sum of digits of your number is " << sum << endl;
          return 0;
      }
```

output
====

Provide a number
123
The sum of digits of your number is 6

```
(13)  #include <iostream>
      using namespace std;
      int main()
      {
          int n, count =0;
          cout <<" Provide a number \n";
          cin >> n;
          for (int i=1; i<=n; i++)
          { if ( n % i ==0)
              count ++;
          }
          if (count != 2)
              cout << n <<" Is not a prime number\n";
          else
              cout << n <<" Is a prime number \n";
          return 0; }
```

Provide a number

11

11 is a prime number