ASSIGNMENT – 1

1.1.1 List the steps in the program development cycle.

Sol. -

- Analyze the problem
- Design a solution
- Code the program
- Test the program

1.1.2 Write a C++ program that prints “Hello World” five times.

Sol.-

```
#include<iostream>
using namespace std;
int main()
{
  cout<<”Hello World \n”;
  cout<<”Hello World \n”;
  cout<<”Hello World \n”;
  cout<<”Hello World \n”;
  cout<<”Hello World \n”;
```

```
return 0;
}
```

1.1.3 What will be the output of the following program?

```
#include<iostream>
using namespace std;
int main()
{
cout << "It's a Small World After All!!";
return 0;
}
```

Sol.- Output: It's a Small World After All!!"

1.1.4 Identify three errors in the following program:

```
#include_<iostream.h>
using namespace std;
int main.....
{
cout << "Hello World"......
```

```
return 0;
}
```

Sol.-

```
#include<iostream.h> // no space should be there b\w include and <iostream>
using namespace std;
int main()          // brackets "()" with main
{
cout << "Hello World" ;   // use semicolon to terminate statement
return 0;
}
```

1.2.1 Write a pair of statements that prompts for and inputs a user's age.

Sol.-

```
#include<iostream>
using namespace std;
int main()
{
int age;     //declaration
cout<<"Type Your Age Here=";
cin>> age;
```

```
cout<<"\nUser's Age=";
cout<<age<<endl;
system("pause");
return 0;
}
```

1.2.2 Write a C++ program that computes and displays the strike rate of a cricket player in a match when the user inputs the number of runs scored and number of balls faced. (Hint: StrikeRate = RunsScored / BallsFaced * 100)

Sol.-

```
#include<iostream>
using namespace std;
int main()
{
float a;            //a=Number of run scored
float b;           //b=Number of balls faced
cout<<"Run scored:";
cin>>a;
cout<<"\nBalls Faced:";
cin>>b;
```

```
    float sr;
    sr=(a/b)*100;
    cout<<"\nStrike Rate:"<<sr<<endl;
    system("pause");
    return 0;
}
```

1.2.3 Write a C++ program to exchange the value of two variables without using a temporary variable. (Hint: Use arithmetic operations)

Sol.-

```
#include<iostream>
using namespace std;
int main()
{
   int a;//Declaration
   int b;//Declaration
   cout<<"Enter Two Numbers Here \n Number 1= ";
   cin>>a;
   cout<<"/n Number 2= ";
   cin>>b;
   a=a+b;
   b=a-b;
   a=a-b;
```

```
  cout<<"The Numbers after Swapping are \n Number 1=
"<<a<<"\n Number 2="<<b<<endl;
   system("pause");
   return 0;
}
```

1.2.4 What will be the output of the following program:

```
#include<iostream>

using namespace std;

 int main()

 {

 int x = 10, y = 20;

cout << " X = " << x << endl;

cout << " Y = " << y << endl;

x = y; y = x;

cout << " X = " << x << endl;

 cout << " Y = " << y << endl;

return 0;

 }
```

Sol.- **OUTPUT:** X=10

Y=20

X=20

Y=20

1.2.5 Identify three errors in the following program fragment:

```
int main.....
 {
 int percent.. age;
int percentage;
int percentage = 100;
int num1 = 2, float num2 = 20; }
```

Sol.-

```
 int main()        //  "()" after main function
{
int percent_age;      // cannot use space in identifier name
int percentage;
int percentage = 100;
```

```
int num1 = 2,          // cannot define two different types of
float num2 = 20;       variables in single statement
}
```