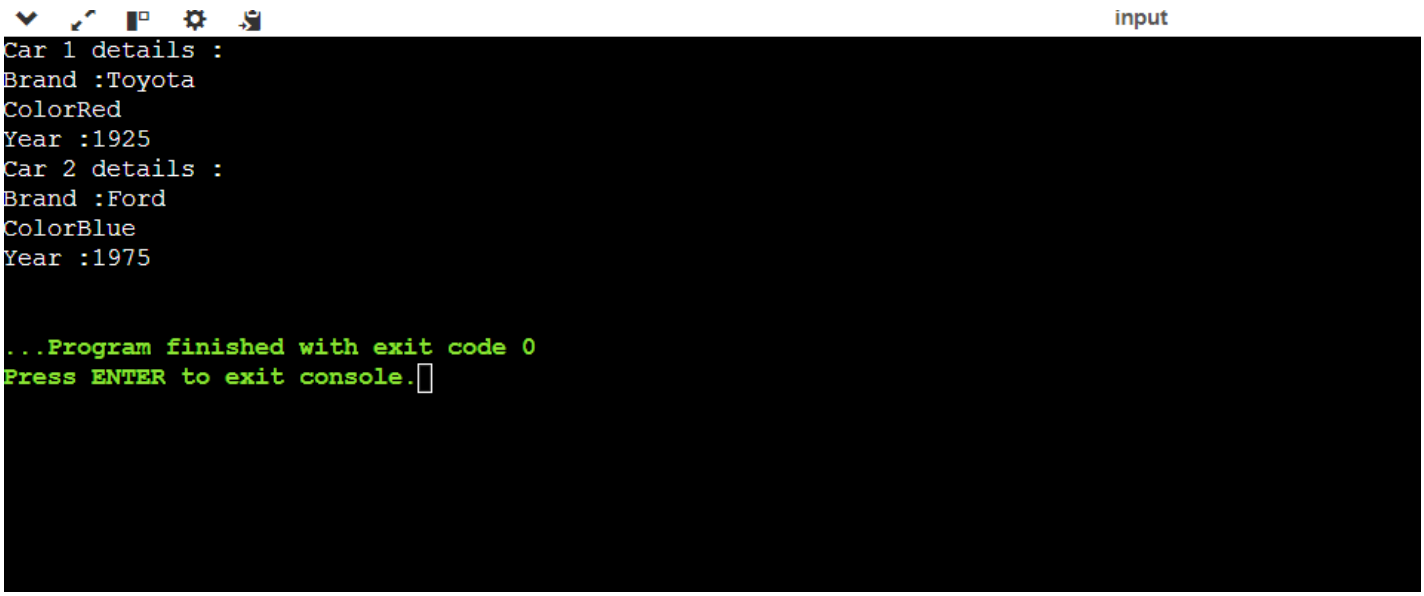
Experiment 1 – C

```
#include <iostream>
using namespace std;
class Car{
   public:
   string brand;
   string color;
   int year;

   Car(string b , string c , int y )
   {
      brand=b;
      color=c;
      year=y;
   }
   void display()
   {
      cout <<"Brand :"<<brand<<"\nColor"<<color<<"\nYear :"<<year<< endl;
   }
};

int main()
{
   Car car1("Toyota ","Red",1925);
   Car car2("Ford","Blue",1975);
   cout<<"Car 1 details : "<<endl;
   car1.display();
   cout<<"Car 2 details : "<<endl;
   car2.display();
   return 0;
}
```

Output:-


input
Car 1 details :
Brand :Toyota
ColorRed
Year :1925
Car 2 details :
Brand :Ford
ColorBlue
Year :1975
...Program finished with exit code 0
Press ENTER to exit console.

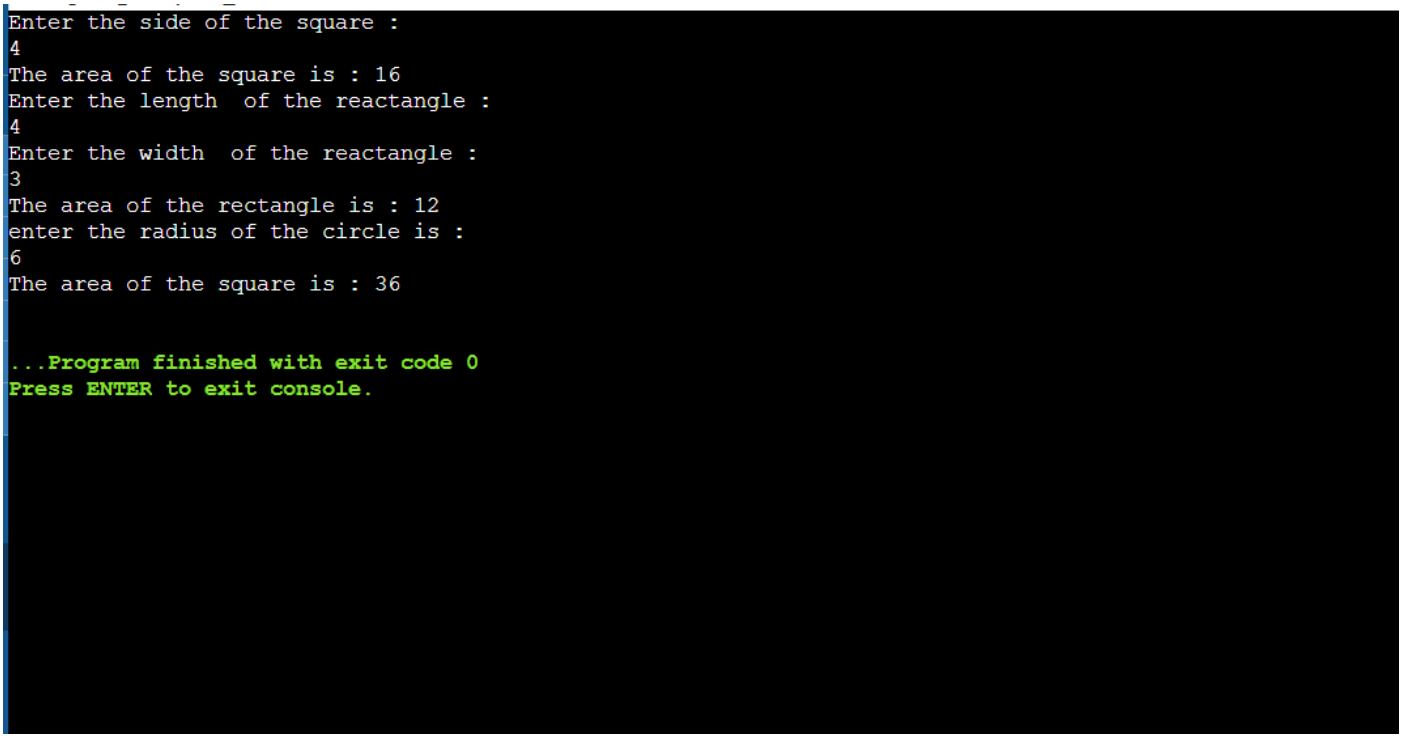
Experiment 2 – A

Code : -

```
#include <iostream>
using namespace std;
float pi = 3.14;
int area (int side)
{
   return side*side;
}
int area(int len , int width)
{
   return len*width;
}
int area(float rad)
{
   return pi*rad*rad;
}

int main()
{
   int sideint;
   cout<<"Enter the side of the square : " << endl;
   cin>>sideint;
   cout<<"The area of the square is : "<<area(sideint)<<endl;

   int length,wid;
   cout<<"Enter the length  of the reactangle : " << endl;
   cin>>length;
   cout<<"Enter the width  of the reactangle : " << endl;
   cin>>wid;
   cout<<"The area of the rectangle is : "<<area(length,wid)<<endl;

   int radius;
   cout<<"enter the radius of the circle is : "<<endl;
```

```
    cin>>radius;
    cout<<"The area of the square is : "<<area(radius)<<endl;
}
```

Output:-

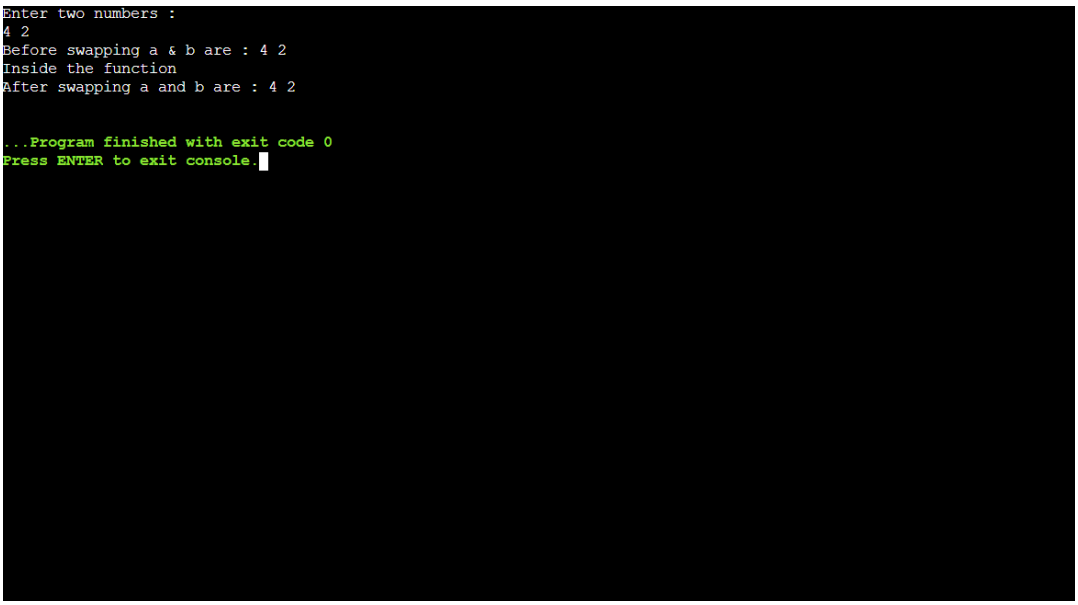


Experiment 2 – B1

Code: -

```
#include <iostream>

using namespace std;

void swap (int x , int y)

{

   int temp = x;

   x=y;

   y=temp;

   cout<<"Inside the function "<<endl;

}

int main()

{

   int a,b;

   cout<<"Enter two numbers : "<<endl;

   cin>>a>>b;

   cout<<"Before swapping a & b are : "<<a<<" "<<b<<endl;

   swap(a,b);

   cout<<"After swapping a and b are : "<<a<<" "<<b<<endl;

   return 0;


}
```

Output: -

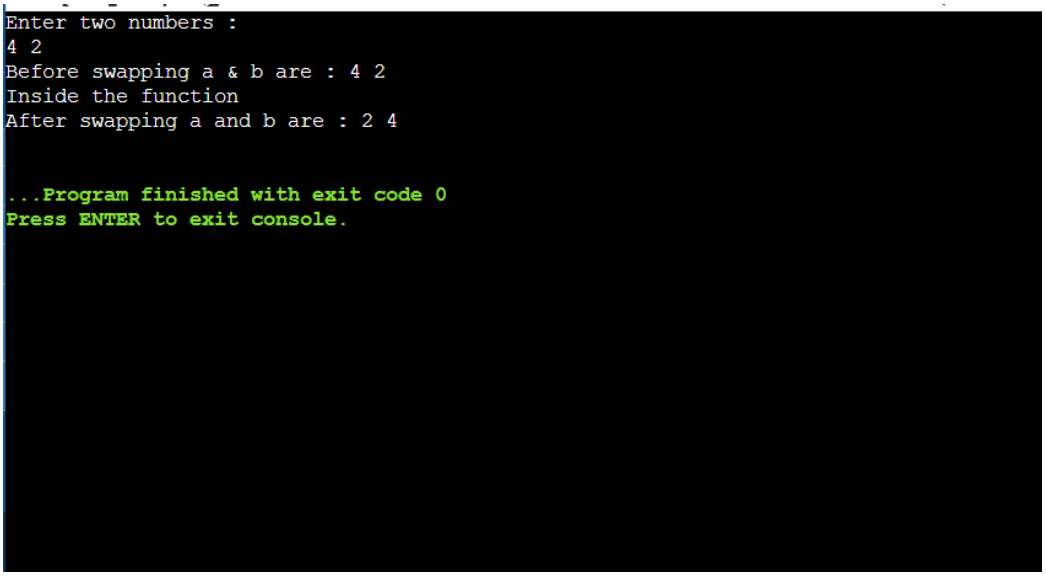


Experiment 2 – B2

Code:-

```
#include <iostream>
using namespace std;
void swap (int &x , int &y)
{
   int temp = x;
   x=y;
   y=temp;
   cout<<"Inside the function "<<endl;
}
int main()
{
   int a,b;
   cout<<"Enter two numbers : "<<endl;
   cin>>a>>b;
   cout<<"Before swapping a & b are : "<<a<<" "<<b<<endl;
   swap(a,b);
   cout<<"After swapping a and b are : "<<a<<" "<<b<<endl;
   return 0;

}
```

Output: -

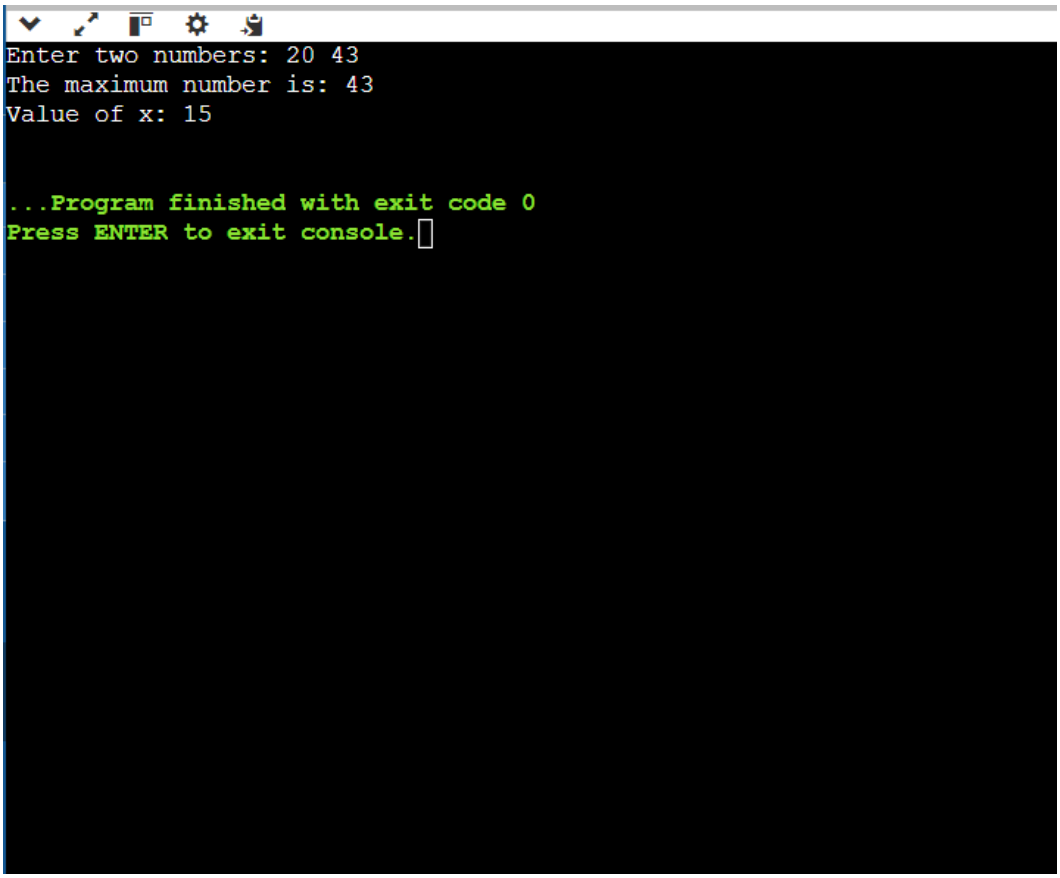


Experiment 2 – B3

Code:-

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

int x;
int& retByRef()
{
   return x;
}
void printMaxNumber() {
   int num1, num2;
   cout << "Enter two numbers: ";
   cin >> num1 >> num2;

   if (num1 > num2) {
      cout << "The maximum number is: " << num1 << endl;
   } else {
      cout << "The maximum number is: " << num2 << endl;
   }
}
int main()
{
   printMaxNumber();
   retByRef() = 15;
   cout << "Value of x: " << x << endl;
   return 0;
}
```

Output: -

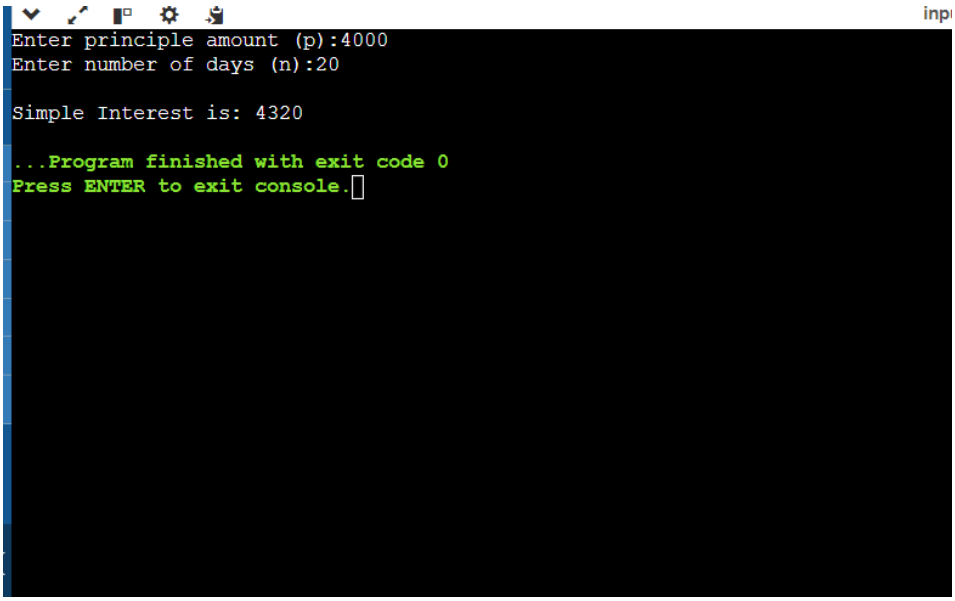

Enter two numbers: 20 43
The maximum number is: 43
Value of x: 15
...Program finished with exit code 0
Press ENTER to exit console.

Experiment 2 – C1

Code:-

```
#include <iostream>

using namespace std;

float SI (int p, int n, float r=5.4) {

   return ( p*n*r/100);

}

int main() {

   int p, n;

   cout << "Enter principle amount (p):" ;

   cin >> p;

   cout << "Enter number of days (n):";

   cin >> n;

   cout << "\nSimple Interest is: " << SI(p,n);


   return 0;

}
```

Output: -

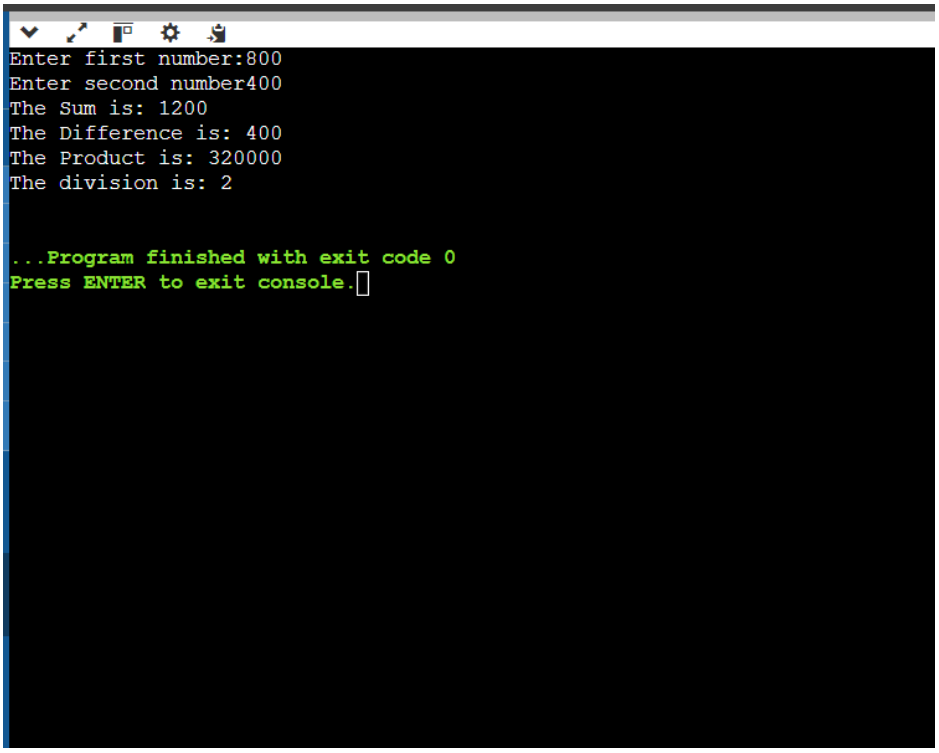


Experiment 2 – C1

Code:-

```
#include <iostream>

using namespace std;


inline int sum (int a, int b) { return (a+b);}


inline int diff (int a, int b) { return (a-b); }


inline int prod (int a, int b) { return (a*b); }


inline float divi (float a, float b) { return (a/b); }


int main() {
   int p, n;
   cout << "Enter first number:" ;
   cin >> p;
   cout << "Enter second number";
   cin >> n;
   cout<<"The Sum is: " << sum(p,n)<<endl ;
   cout<< "The Difference is: " << diff(p,n)<<endl;
   cout<< "The Product is: " << prod(p,n)<<endl ;
   cout<< "The division is: " << divi(p,n)<<endl;


   return 0;
}
```

Output: -


Enter first number:800
Enter second number400
The Sum is: 1200
The Difference is: 400
The Product is: 320000
The division is: 2
...Program finished with exit code 0
Press ENTER to exit console.

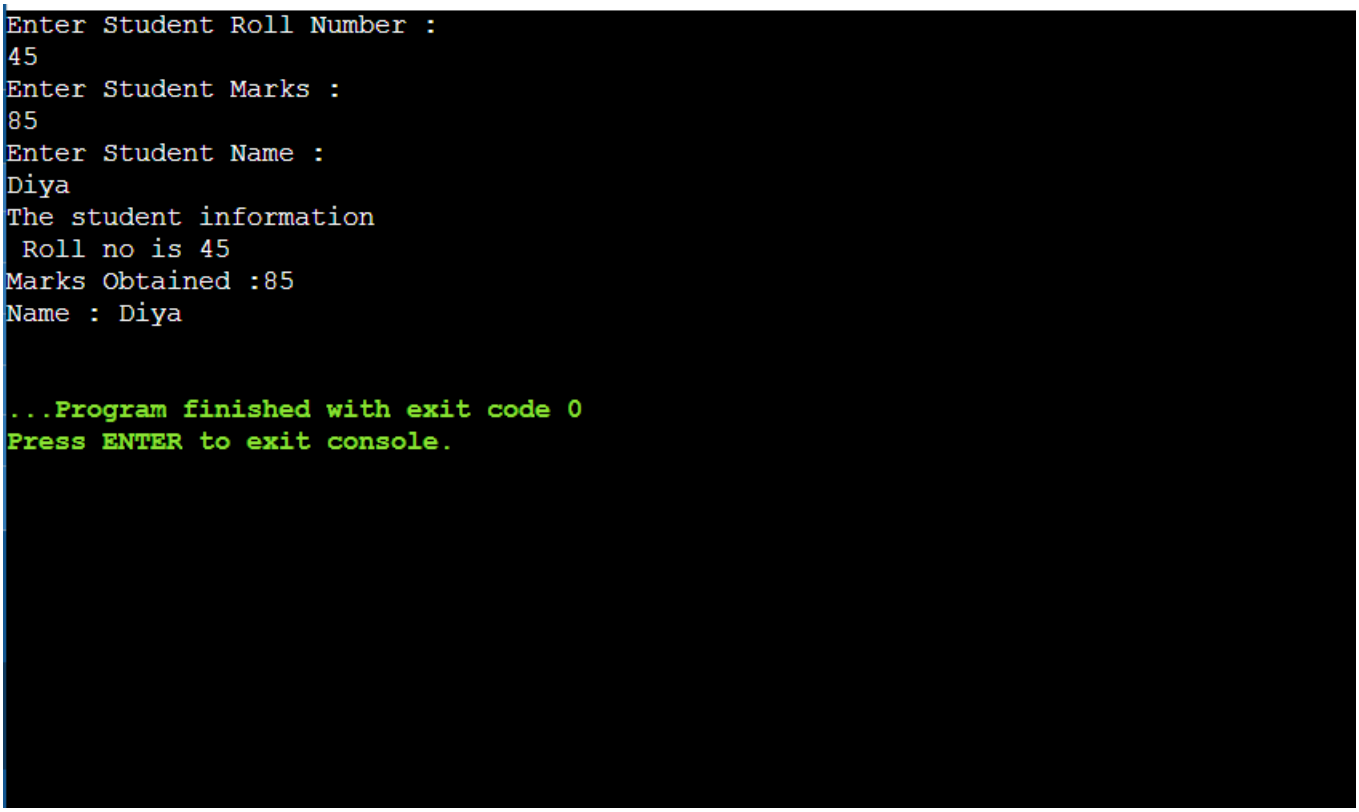
Experiment 3 – A

Code:-

```
#include <iostream>
#include <string>
using namespace std;
class student
{
   private:
   int roll_no;
   int marks;
   string name;

   public:
   friend class college;
};
class college
{
   public:
   void display(student&s)
   {
      cout<<"Enter Student Roll Number : "<<endl;
      cin>>s.roll_no;
      cout<<"Enter Student Marks : "<<endl;
      cin>>s.marks;
      cout<<"Enter Student Name : "<<endl;
      cin>>s.name;
      cout<<"The student information \n Roll no is "<<s.roll_no<<endl;
```

```
        cout<<"Marks Obtained :"<<s.marks<<"\n"<<"Name : "<<s.name<<endl;
    }
};
int main()
{
    student s1;
    college c1;
    c1.display(s1);
    return 0;


}
```

Output:-



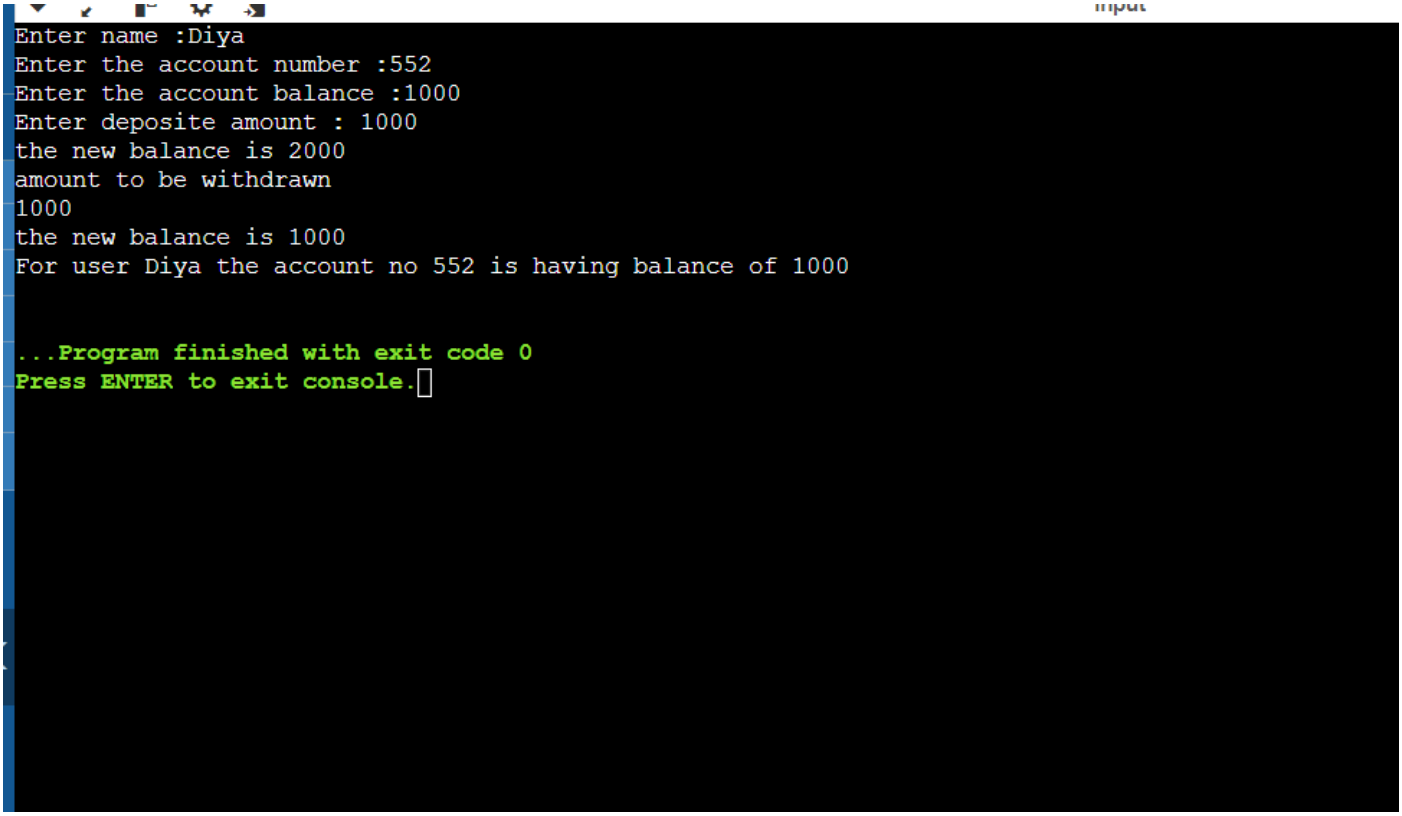
Experiment 3 – B

Code:-

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

class bank{
  int acc_no;
  char name[50];
  double bal;
  public:
  void deposit();
  void withdraw();
  void display();
};
void bank::deposit(){
    int dep;
    cout << "Enter name :";
    cin>>name;
    cout << "Enter the account number :";
    cin>>acc_no;
    cout << "Enter the account balance :";
    cin>>bal;
    cout << "Enter deposite amount : ";
    cin>>dep;
    bal+=dep;
    cout<<"the new balance is "<<bal<<endl;
}
void bank::withdraw(){
    double amo;
    cout<<"amount to be withdrawn "<<endl;
    cin>>amo;
    bal-=amo;
    cout<<"the new balance is "<<bal<<endl;
}
```

```
void bank::display(){
   cout<<"For user "<<name<<" the account no "<<acc_no<<" is having balance of "<<bal<<endl;
}
int main() {
   bank b;
   b.deposit();
   b.withdraw();
   b.display();
   return 0;
}
```

Output:-

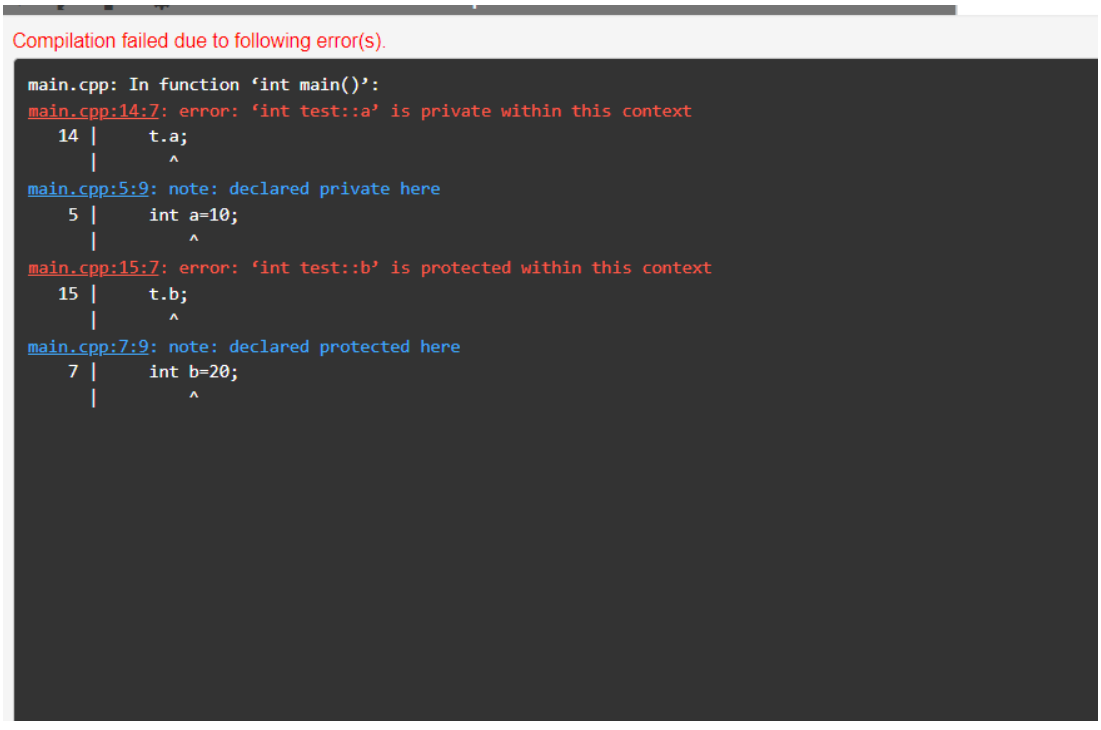


Experiment 3 – C1

Code:-

```
#include <iostream>

using namespace std;

class test{
   private:
   int a=10;
   protected :
   int b=20;
   public :
   int c=30;
};


int main(){
   test t;
   t.a;
   t.b;
   t.c;


   return 0;
}
```

Output:-



Experiment 3 – C2

Code:-

```
#include <iostream>

using namespace std;


class test {

private:

   int a = 10;

protected:

   int b = 20;

public:

   int c = 30;



   int getA() {

      return a;

   }

};


int main() {

   test t;


   cout << t.getA() << endl;


   return 0;

}
```

Output:-