2. Create a base class called shape. Using this class to store two double type values that could be used to compute the area of figures. Derive two classes called triangle and rectangle from shape. Add to the base class, a member function get_data() to initialize base class data members and another member function display_area() to compute and display the area of figures. Make display_area() as a virtual ~~to compute~~ as a virtual function and re-define this function in the derived classes to suit their requirements. Using these three classes, design a program that will accept dimensions of a triangle of a rectangle interactively, and display the area.

Program:

```
//Author Name: Al-Fareed
// Registration No: 210970049
// Date of Creation: 4-Jan-22
// Program Name: To Calculate area of given shape.
//
#include <iostream>
using namespace std;
class shape
{
    public: double val1, val2, ar_tri, ar_rect;
        void get_data(double a, double b)
        {
            val1 = a;
            val2 = b;
            ar_rect = val1 * val2;
            ar_tri = 0.5 * val1 * val2;
```

```
    }
    virtual void display_area()=0;
};
class triangle: public shape
{
  public:
      void diplay_area()
      {
          cout<<" Area of Triangle :"<<ar_tri;
      }
};
class rectangle: public shape
{
   public: void display_area()
        {
          cout<<"\nArea of Rectangle :"<<ar_rectan
        }
};
int main()
{
    double val1, val2;
    cout<<" Enter two values :"<<endl;
    cin>>val1>>val2;
    shape *bptr;
    bptr= new rectangle;
    bptr-> get_data(val1, val2);
    bptr-> display_area();
    bptr= new triangle;
    bptr-> get_data(val1, val2);
    bptr-> display_area();
}
```

OUTPUT:

```
Enter two value: 4 4
Area of Rectangle: 16
Area of Triangle: 8
```