**CHAROTAR UNIVERSITY OF SCIENCE & TECHNOLOGY**

**DEVANG PATEL INSTITUTE OF ADVANCE TECHNOLOGY & RESEARCH**

Department of Computer Engineering/Computer Science & Engineering/ Information Technology

**Subject Name: Object Oriented Programming with C++**

**Semester: II**

**Subject Code: CE144**

**Academic year: 2020-21**

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| **No.** | **Aim of the Practical** |
| **34.** | **Create a class shape having data member shape\_name and member function to get and print shape\_name. Derive a Class Circle which is inherited publicly from class shape and having data members radius of a circle and member function to get and print radius of a circle. Derive a Class Area which is inherited publicly from Class Circle and having data members area\_of\_circle and member function display () which displays area of a circle. Use object of class Area in main () function and get and display all the information. Use the concepts of Multilevel Inheritance.**  **PROGRAM CODE :**  #include <iostream>  using namespace std;  class shape  {  protected:  string shape\_name;  public:  void getdata()  {  cin >> shape\_name;  }  };  class Circle : public shape  {  protected:  float radius;  public:  void getdata1()  {  cin >> radius;  }  };  class Area : public Circle  {  protected:  float area\_of\_circle;  public:  float area()  {  area\_of\_circle = 3.14 \* radius \* radius;  return area\_of\_circle;  }  void putdata2()  {  cout << "The shape name is: " << shape\_name << endl;  cout << "The radius is: " << radius << endl;  cout << "The area of circle is: " << area() << endl;  }  };  int main()  {  Area a1;  cout << "Enter the shape name: " << endl;  a1.getdata();  cout << "Enter the radius: " << endl;  a1.getdata1();  a1.putdata2();  }  **OUTPUT:**    **CONCLUSION:** In this practical we learnt how to use the concept of multilevel inheritance. |