Single Inheritance-Practice Programs
19CSE201-Advanced Programming

1. Design a class name *Square* that defines a square geometric shape. The class must have a data member named *side* that defines the length of each side. Then define two member functions, *getPeri* and *getArea*, to find the perimeter and area of the square shape. Now define a *Cube* that defines a cubic shape and inherits from the *Square* class. The class *Cube* needs no new data members, but it needs the member functions *getArea* and *getVolume*. Provide the appropriate constructors and destructors for both classes.

2. Design a class named *Rectangle* with two private data members: *length* and *width*. Define constructors and a destructor for the class and write member functions to find the perimeter and area of a rectangle. Then define a class named *Cuboid* (representing a box) that inherits from the class *Rectangle* with an extra data member: *height*. Then write constructors and a destructor for the *Cuboid* class, and write member functions to find the surface and volume of the *Cuboid* objects.

3. Design Payroll System using c++ inheritance concepts

Base class name: employee

Base class Data member:

```
int eno;
char name[20], des[20];
```

Derived class name: salary

Derived class data member: float basicpay, hra, da, pf, netpay;

Demonstrate your payroll system using different access specifiers mode. (for both data member and member function.

Write your observation for the same.