**Day 3**

Name: Roll:

1. Write a program to create a class named “vehicle” having protected instance variables Licence\_number, speed, color, owner\_name and a method “showdata()” to show the message “This is a vehicle class” and all the above details. Inherit the vehicle class and create two subclasses named “Bus” and “Car” having individual private instance variable route\_no in “Bus” and manufacturer\_name in “Car” and both of them having “showdata()” method showing all details of bus and car respectively with content of the super class’s “showdata()” method. Use dynamic method dispatch.

2. Define a class Shape and then find out the whole surface area and volume of a parallelepiped, cylinder and sphere using i)method overloading ii) Inheritance

(Volume: parallelepiped: length\*breadth\*height, Sphere: 4/3\*PI\*radius\*radius\*radius , Cylinder: PI\*radius\*radius\*height

Whole surface area : parallelepiped : 2(length\*breadth + length\*height + height\*breadth), Sphere: 4\*PI\*radius\*radius, Cylinder: 2\*PI\*radius(radius + height) )