



**NOTE:**

Only submit .cpp file of each question in a folder. Anyone who submits any other format file will get straight **ZERO**. Each question should have a separate .cpp file. Copy Paste or other UFM will also get **ZERO**. Use the following format for naming the folder Roll#\_Name (P18-1234\_NAME).

**Q No.1:** . Implement the following member functions for each class;

- Shapes: area()
- 2D shapes: area()
- 3D shapes: area (), volume()
- Circle: radius, area()
- Square: side, area()
- Cube: length, width, height, area(),volume()
- Pyramid: base, height, area(),volume()

Using the concept of Abstract class, pure virtual functions and polymorphism override the concerned functions in the derived classes and also write constructors and destructors of each class. In the main function create two array of pointers to the 2D Shapes and 3D Shapes classes.

