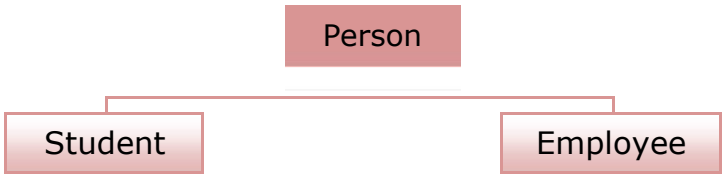
College of Engineering and Management, Kolaghat
Object Technology Laboratory, (5th Semester, IT)

1. An inheritance hierarchy is given as follows:

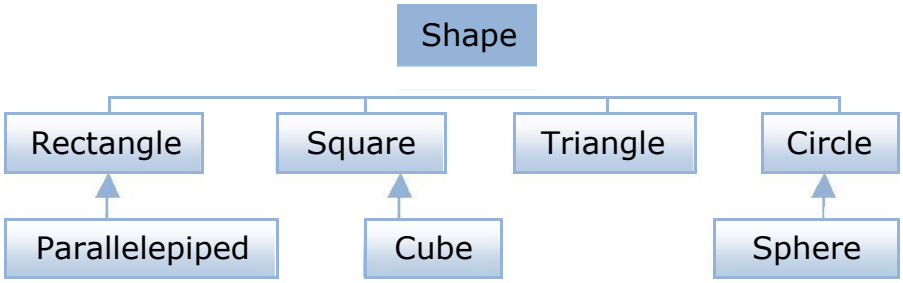


Write a JAVA program to perform the following:

a. Create a class for each entity shown above
b. Instance variables for Person – name, dept, DOB [Use the class **java.util.GregorianCalendar** or **java.util.Date**]
c. Instance variables for Student – rollno, sem, cgpa
d. Instance variables for Employee – empId, designation
e. Constructors for each class (default and parameterized)
f. Constructors in each subclass should invoke the constructor of superclass

2. Write a JAVA program to implement *Dynamic Method Dispatch* using above inheritance hierarchy.

3. An inheritance hierarchy is given as follows:



Write a JAVA program to perform the following:

a. Create a class for each entity shown above
b. Instance variables for Shape – dim1, dim2, dim3
c. Make Shape class *abstract*
d. Constructors for each class (default and parameterized)
e. A method to calculate area for each entity. area method in subclass will override the area method in super class. Declare area method in Shape class *abstract.*
f. Prevent Triangle class to be inherited