

Practice Week 2.

1. Create an abstract class Shape with a double value 'Area' and an abstract method getArea(). Create two child classes Triangle and Square.

Triangle should have two double values 'base' and 'height' and should override the getArea() method to calculate and print the area of a triangle.

Square should have a double value 'length' and should override the getArea() method to calculate and print the area of a square.

Create constructors appropriately to set the values.

Create objects of triangle and square in the test class and input appropriately parameters in the constructor. Call the getArea() method of each object.

2. What is runtime and compiletime polymorphism? Do some research on this and create two classes to show runtime and compiletime polymorphism.
3. Is it necessary to override an abstract method? Can we create an object of the abstract class? Explain your answer. Ref: <https://beginnersbook.com/2013/05/java-abstract-class-method/>
4. Create a Calculator class. Create two child classes Plus and Minus. In the Plus class overload a method sum() to print sum of two integers or sum of two double values or concatenate two strings.

Hint:

```
sum(int a, int b)  
sum(double a, double b)  
sum(String a, String b)
```