Object Oriented Programming Lecture 02:

Class and Objects:

Classes:

1. Methods
   1. Constructors – special methods that doesn’t have a return type and called only at the time of creating the Object
   2. Methods?
      1. Static methods
      2. Non static methods
2. Blocks – initialization block
   1. Static initializer
   2. Non static initializer
3. Variables
   1. Instance variable – for each instance there is a copy of the instance variable
   2. Static variable – for class there is only one copy of static variables
   3. CONSTANT – there is a keyword called const but that is not used to declare constant but public static final

What is the difference between Static variable and instance variable?

Static variable one copy per class and every object belongs to the class shares it

Instance variable one copy per object and every object has its own copy

Rectangle as an example:

Calculate the area and the perimeter

1. Length and width are the **instance variable**
2. noOfRectangle is a **static variable** because every time I create an object increase the noOfRectangle by 1 so I need only one copy that copy has to be increased by every time I create an rectangle object
3. Constructor Rectangle(length: double, width: double)
4. Getters and setters for the instance variable – if the objects are immutable then no setter methods
5. getArea(): double
6. getPerimeter(): double

getter method for **noOfRectangle** static variable

How to write?

public static int getNoOfRectangle()