Object Oriented Programming

INTRODUCTION TO OOP

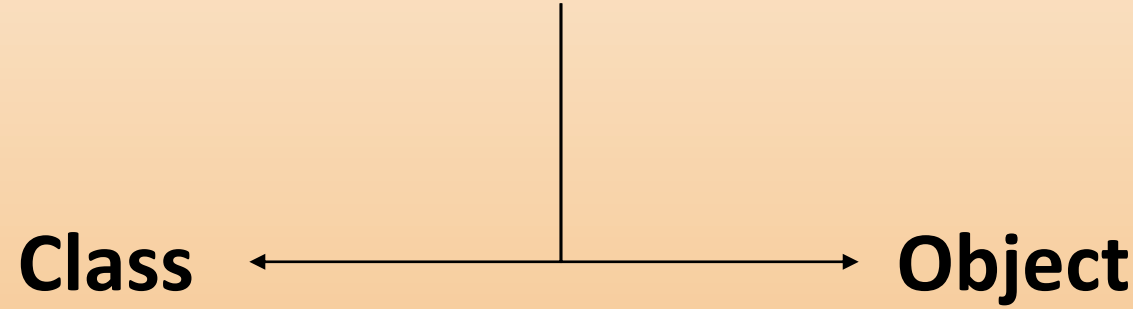
Introduction to OOP

- Creating objects
- Contain both data and methods

Advantages:

- Faster and easier to execute
- Provides a clear structure for the programs
- Helps to keep the Java code DRY "Don't Repeat Yourself", and makes the code easier to maintain, modify and debug
- Makes it possible to create full reusable applications with less code and shorter development time

Two Main Aspects



Class

- A way of organizing information about a type of data so a programmer can reuse elements when making multiple instances of that data type
- A user-defined type that describes what a certain type of object will look like

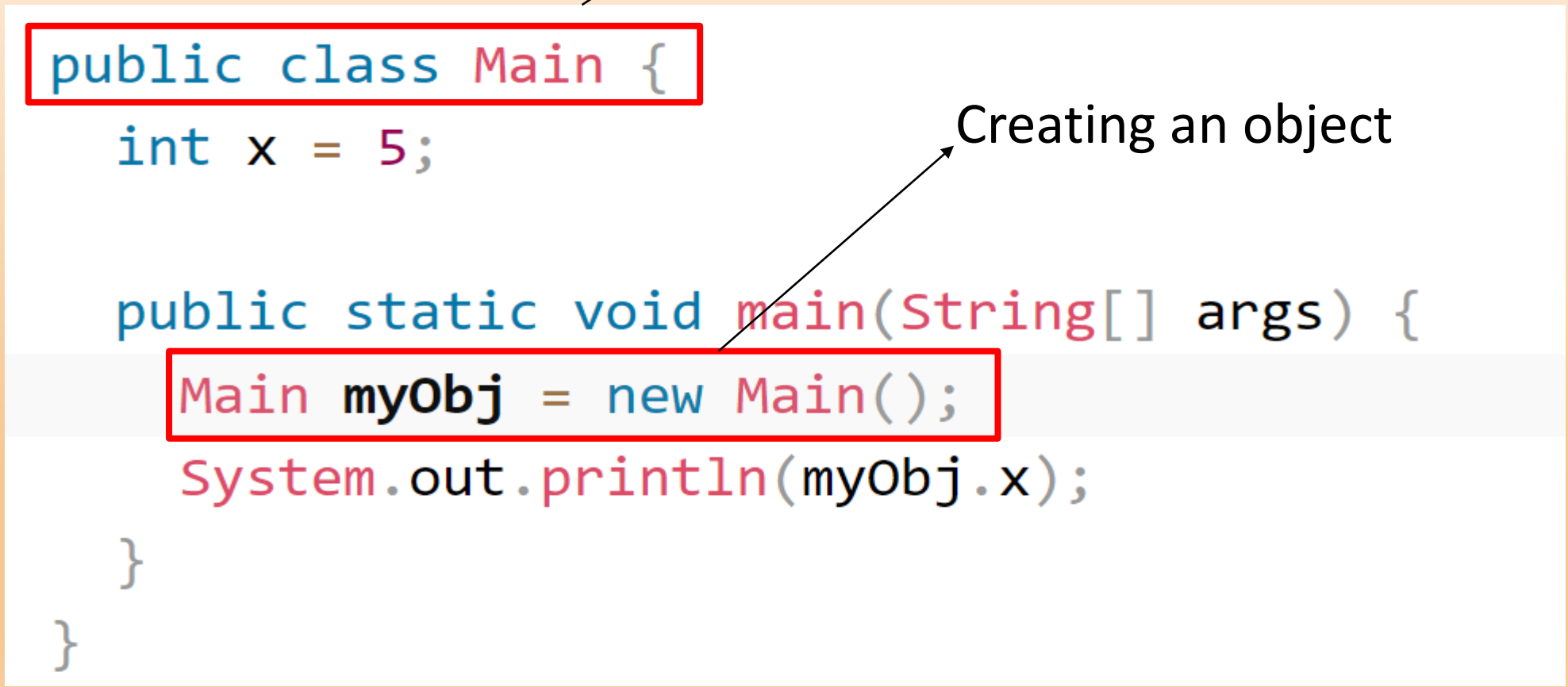
Object

- A collection of related data and/or functionality
- The object is an instance of a class

Class Vs Object

Class	Object
A class is a template for creating objects in program.	The object is an instance of a class.
A class is a logical entity	Object is a physical entity
A class does not allocate memory space when it is created.	Object allocates memory space whenever they are created.
You can declare class only once.	You can create more than one object using a class.
Example: Car.	Example: Jaguar, BMW, Tesla, etc.
Class generates objects	Objects provide life to the class.

Simple Code


Declaring a class
Creating an object
public class Main {
int x = 5;
public static void main(String[] args) {
Main myObj = new Main();
System.out.println(myObj.x);
}
}