

# Java basics

## Java Reference

### Classes, main & output

Every Java program lives inside a class 类. It starts at a method 方法 named `main`. `System.out.println(...)` prints a line; `System.out.print(...)` prints with no new line.

```
public class Main {
    public static void main(String[] args) {
        System.out.println("Hello, world!");
        System.out.println("I am learning Java.");
    }
}
```

- Java is compiled 编译: the compiler 编译器 checks the whole program, then it runs.
- Every statement 语句 ends with a semicolon ;.

### Variables & primitive types

A variable 变量 must declare 声明 its type. Common primitive types 基本类型: `int` (whole number), `double` (decimal), `boolean` (true/false), `char` (one letter).

```
public class Main {
    public static void main(String[] args) {
        int age = 17;
        double price = 9.99;
        boolean passed = true;
        System.out.println(age + " " + price + " " + passed);
    }
}
```

### Comments & style

A comment 注释 is `//` (one line) or `/* ... */` (a block). Indent the code inside braces `{ }`. Class names start Capitalised; variables and methods use camelCase 驼峰命名 (lowercase first).

```
public class Main {
    public static void main(String[] args) {
        // greet the user
        String firstName = "Mei";
        System.out.println("Hi, " + firstName);
    }
}
```