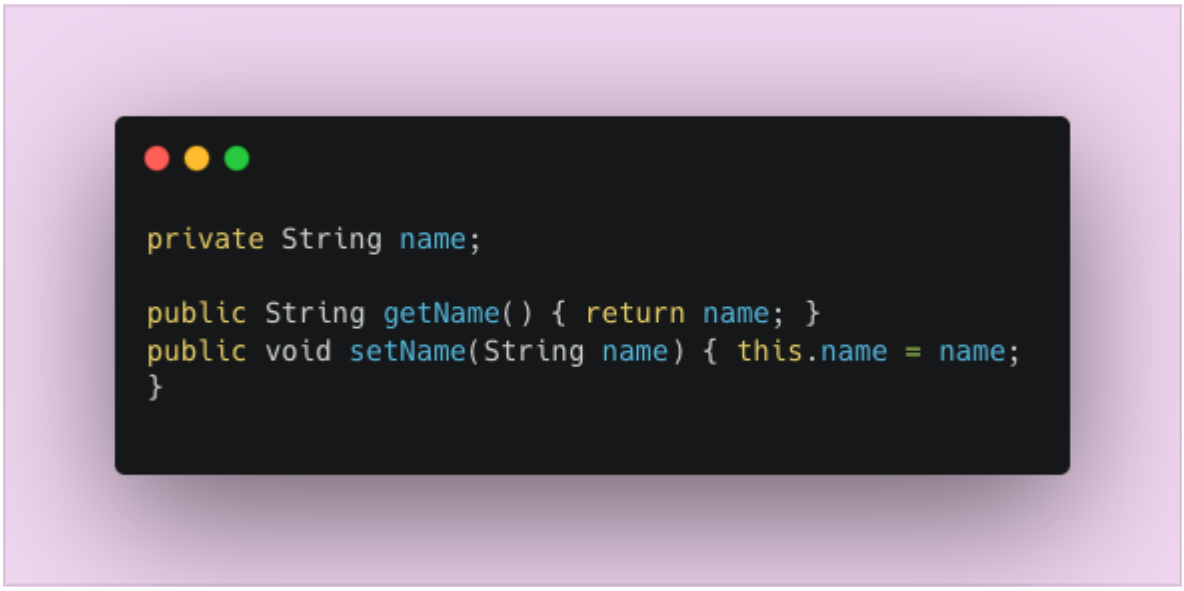
Java Cheat Sheet: collections

1) Encapsulation: private variables with getters and setters

Variables in a class are always private. You make them accessible via getters and setters (encapsulation).



2) Initialising a list: two approaches

You can create an empty list in the constructor:



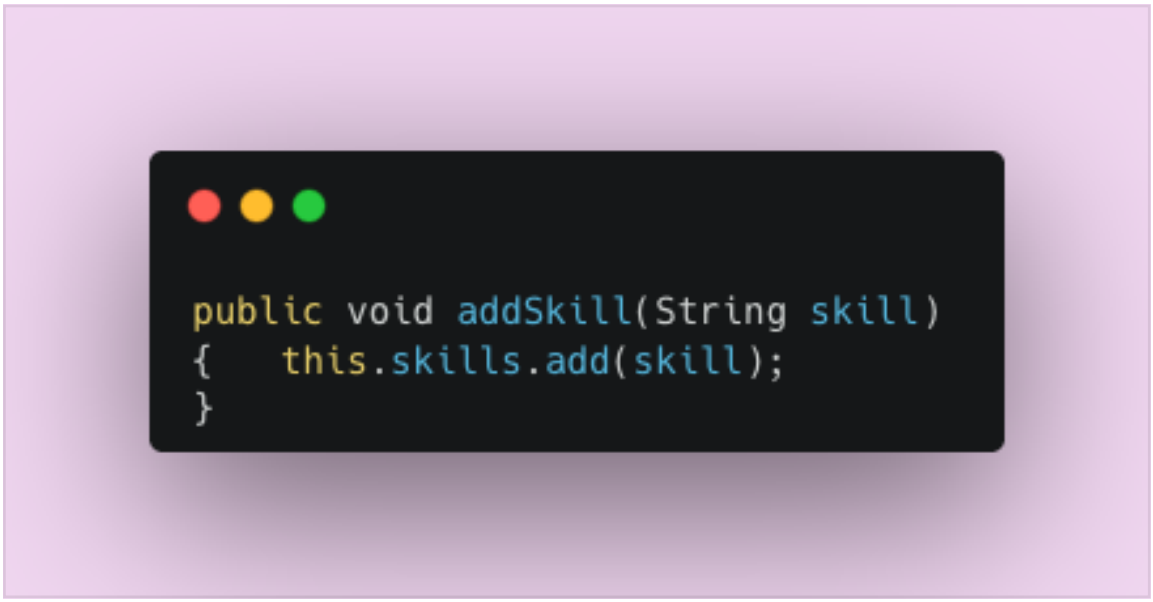
Or initialise a list as a parameter:



```
public CV(String name, List<String> skills)
{   setName(name);
    this.skills = new ArrayList<>(skills)
}
```

Write new ArrayList<>(skills) instead of this.skills = skills, otherwise you share the same reference with the outside world and the list can change unexpectedly.

3) No setter but an adder for lists
IntelliJ sometimes generates a setSkills(...) for a List. Replace this with an addSkill(...). A setter replaces the entire list, an adder adds a single element.



```
public void addSkill(String skill)
{   this.skills.add(skill);
}
```

4) The for-each loop
The shorthand for iterating over a list is called the *enhanced for loop* or *for-each loop*:



This is the shorthand for:



Downside of the for-each: you have no access to the index i.

If you need to generate a list with an index? Type ‘fori’ in IntelliJ and tab

5)Looping over hashMaps
If you want to loop over a hashMap to get keys and value: do

