

# Worked Example

## Joke Generator

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Produced      Ms Siobhan Roche  
by:            Ms Mairead Meagher

# Step 1 – The Idea

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- We want a small program that can:
  1. Tell a random joke (no input needed).
  2. Tell a funny story using a **name** provided by the user.
  3. Take in an **age**, calculate the age in 10 years, and return a jokey message.



# Designing the Methods

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| Method Name                         | Parameters        | Return Type         | Description                                      |
|-------------------------------------|-------------------|---------------------|--|
| <code>tellJoke()</code>             | <code>none</code> | <code>void</code>   | Prints a random joke.                            |
| <code>tellStory(String name)</code> | <code>name</code> | <code>void</code>   | Uses the name to tell a funny story.             |
| <code>ageInTenYears(int age)</code> | <code>age</code>  | <code>String</code> | Returns a message about the person's future age. |

# Pseudocode

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- **JokeGenerator** class:

- **tellJoke:**

- Print a simple programmer joke.

- **tellStory(name):**

- Print a short funny story that uses the person's name.

- **ageInTenYears(age):**

- Work out age + 10.

- Make a jokey message using that number.

- Give the message back to whoever called it.

- **Driver** class:

- Start the program.

- Make a new JokeGenerator object called joker.

- Call joker's tellJoke method.

- Ask the user for their name.

- Call joker's tellStory, passing in the name.

- Ask the user for their age.

- Call joker's ageInTenYears, store the message.

- Print the message.

- Program ends.

# Java Code

```
public class JokeGenerator {

    // Method 1: No parameters, no return
    public void tellJoke() {
        System.out.println("Why don't programmers like nature? It has too many bugs!");
    }

    // Method 2: Parameter, no return
    public void tellStory(String name) {
        System.out.println("Once upon a time, " + name + " tried to debug code at 3am...");
        System.out.println("The bug fixed itself. Legends still talk about it.");
    }

    // Method 3: Parameter and return value
    public String ageInTenYears(int age) {
        int futureAge = age + 10;
        return "In 10 years, you'll be " + futureAge + " years old — still debugging!";
    }
}
```

```
import java.util.Scanner;

public class Driver {

    public static void main(String[] args) {
        Scanner input = new Scanner(System.in);

        // Create an object of JokeGenerator
        JokeGenerator joker = new JokeGenerator();

        // 1. Tell a joke
        joker.tellJoke();

        // 2. Ask for name and tell a story
        System.out.print("\nEnter your name: ");
        String userName = input.nextLine();
        joker.tellStory(userName);

        // 3. Ask for age and give future message
        System.out.print("\nEnter your age: ");
        int age = input.nextInt();
        String message = joker.ageInTenYears(age);
        System.out.println(message);
    }
}
```

# Questions?

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