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1

Introduction to Programming

Problem Solving with Python

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What is Programming ?

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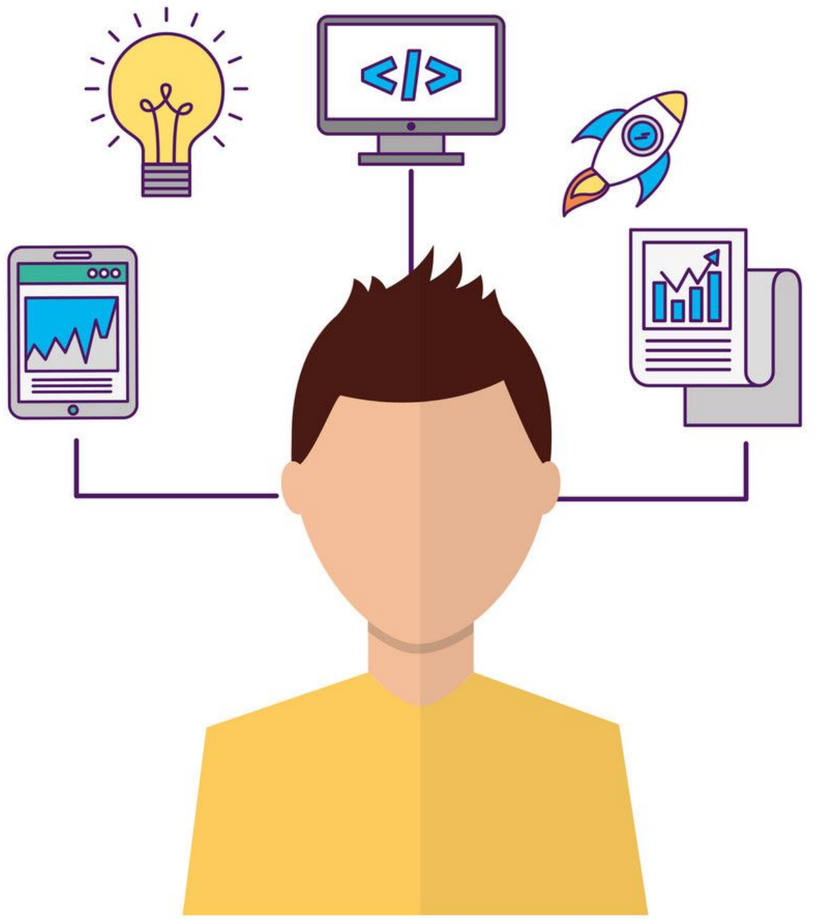
Definition :

Programming is the **process of creating instructions** for computers to perform specific tasks.



Programming Analogy :

Programming Analogy :

Providing data and commands to computer.

The computer processes the input data using algorithms.

The computer produces results or actions based on the processed data.

Example : Making a cup of Coffee

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Example : Making a cup of Coffee

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Input: Adding coffee grounds and water into a coffee machine.

Example : Making a cup of Coffee

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Process: The coffee machine brewing the coffee.

Example : Making a cup of Coffee

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Output: A freshly brewed cup of coffee being poured into a mug.

Example : Making a cup of Coffee

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Input

Process

Output

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Pseudocode in Programming

What is Pseudocode ?

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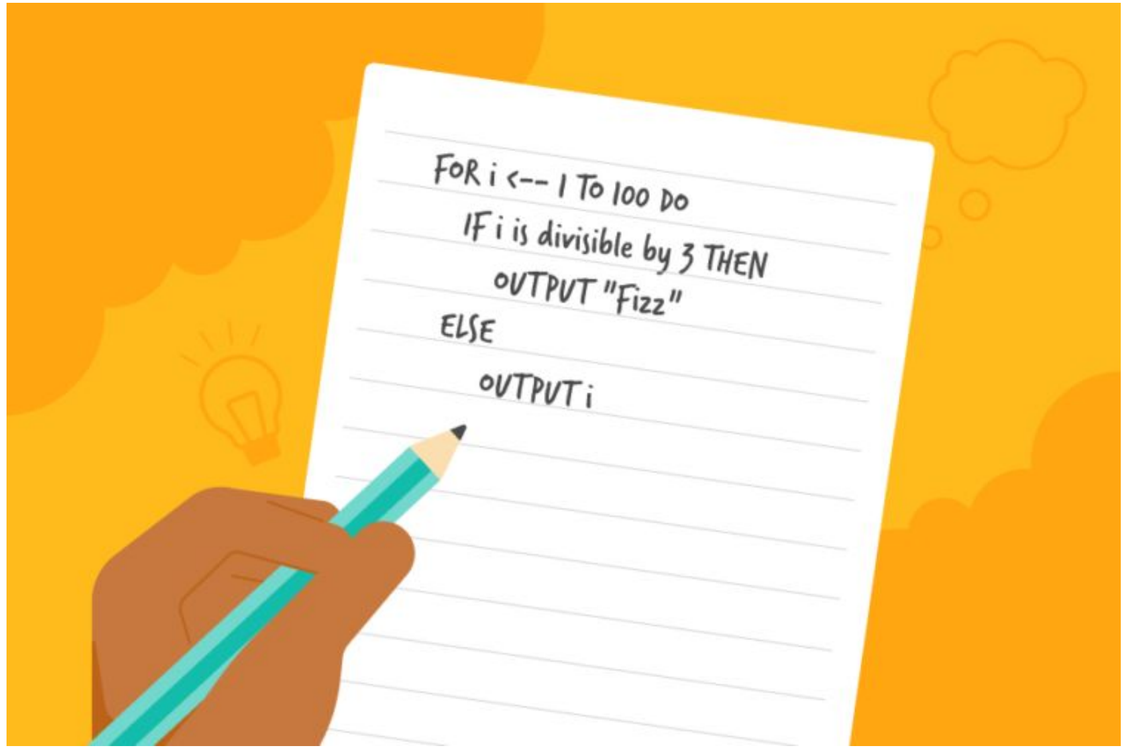
Pseudocode :

Pseudocode is a simplified, plain-language description of the **steps in a program**, used to plan and communicate ideas before writing actual code.



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Classroom Activity

Let’s make coffee :)

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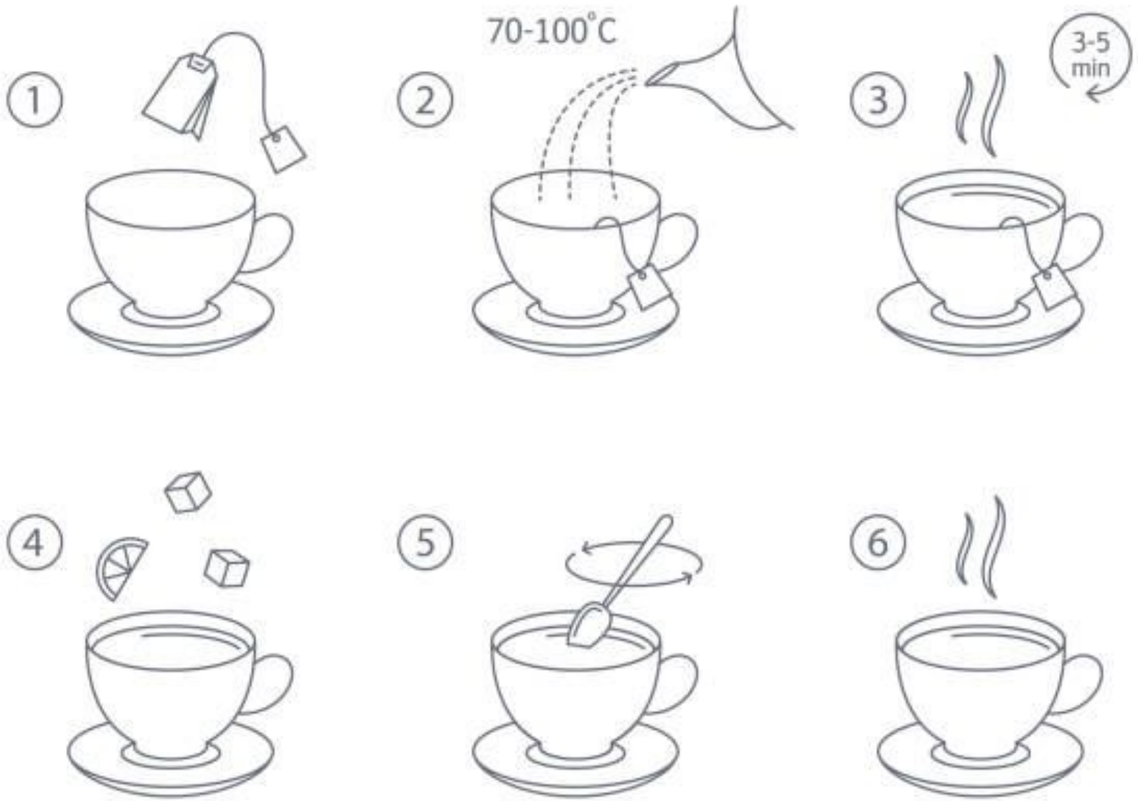
Steps for making a cup of Coffee :



Steps for making a cup of Coffee :

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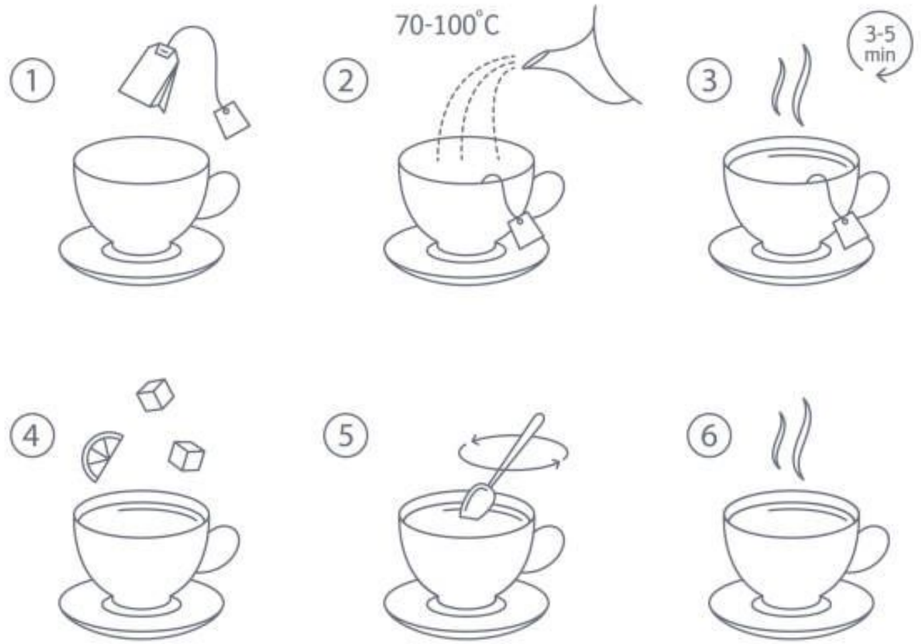
1. Start
2. Boil water
3. Add coffee bag to cup
4. Pour boiling water into cup
5. Decide: Do you want to add milk?
    - Yes: Add milk
    - No: Skip to next step
6. Stir the coffee
7. End



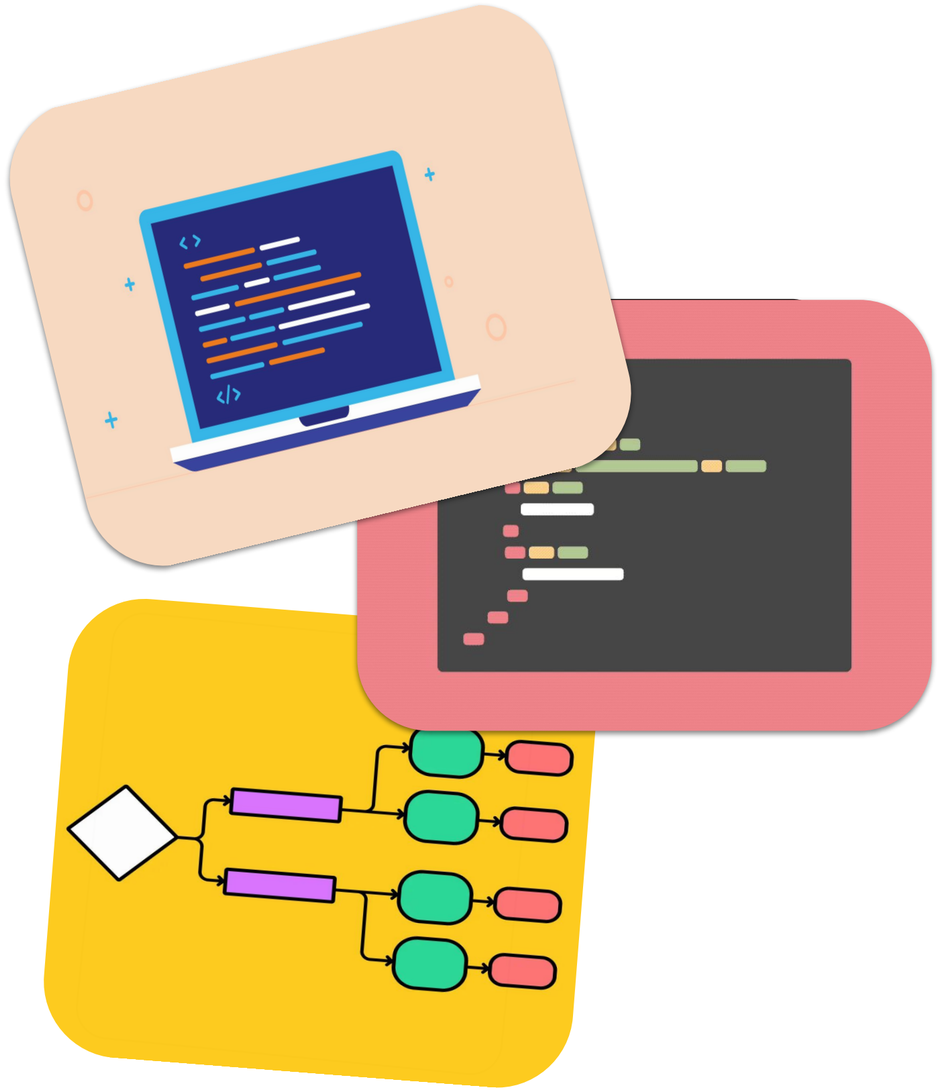
Game Time!

Tortoise Water Game

Boat to the Shore

Summary

- **Programming** - Instructions for computers to perform specific tasks.
- **Pseudocode** - Plain-language description of the steps in a program



Thank You!