

Basic Concepts

Thanks to Jeny Teheran who did a STEM “AAUW TechSavvy” with me and wants us to cover this material first!

Coding

- Writing Code tells the Device what to do
- The instructions must be in specific and precise steps

Programming Language

- A programming (or coding) language is a set of syntax rules that define how code should be written and formatted.

- Java
- Python
- JavaScript
- SQL
- C++,
- C#



Software - Global term for all the components (programs) distinct to hardware that tell a device what to do and how to behave

Application - A type of software that does a certain task. Intended for a particular platform or device. Often needs user interaction to function

Program - Sequence of instructions that comply the rules of a specific programming language, written to perform a specified task with a computer

Algorithm

Self-contained step-by-step set of operations to be performed to solve a specific problem or a class of problems.

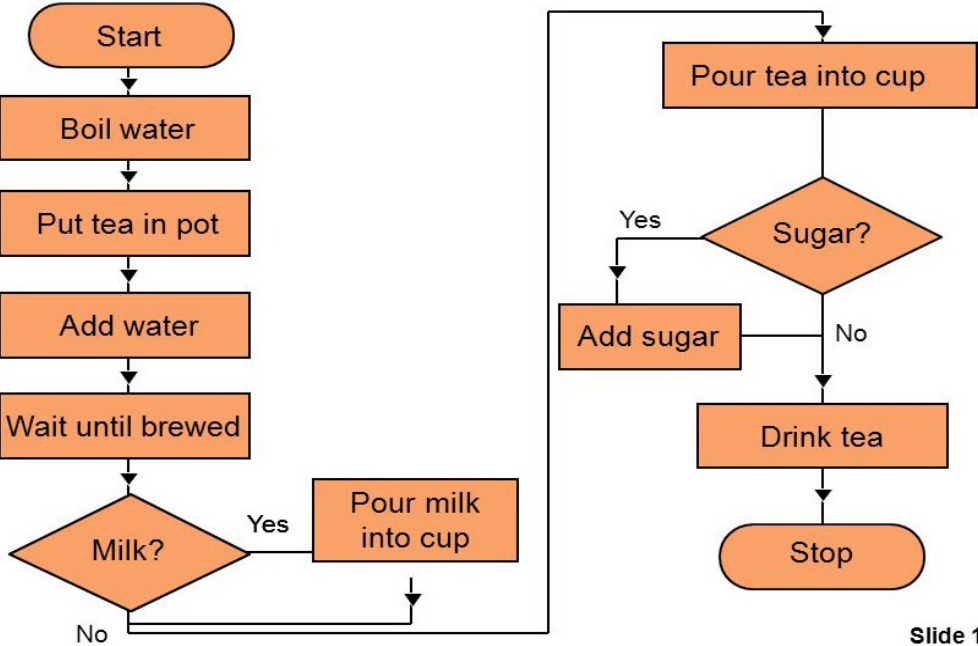


Program of Algorithm

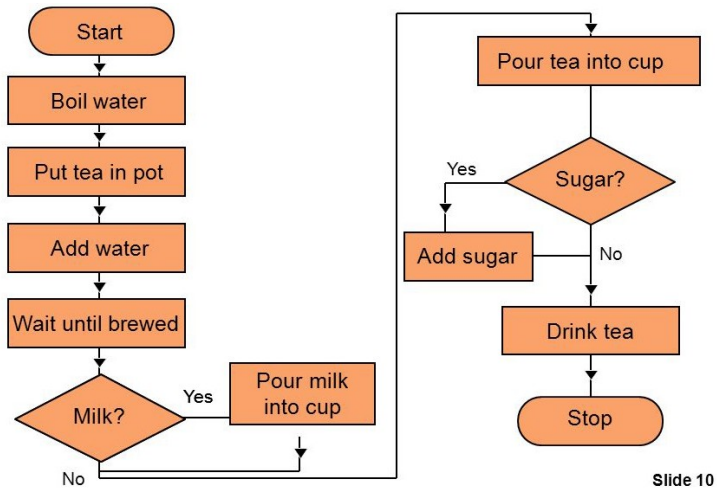


Algorithm Flowchart

Making tea



Algorithm Pseudocode



```
Start
| Boil water
| Put tea in a pot
| Add water
| Wait until brewed
| If (Milk?)
| | Pour milk into cup
| EndIf
| Pour tea into cup
| If (Sugar?)
| | Add sugar
| EndIf
| Drink tea
Stop
```


If you have an idea for an Application then

- Write down the algorithm to sketch out your ideas
- Use your own words
- Select a programming language
- Only then write the code, (and remember to test it, deploy it, document it and use it!)