#### FUNDAMENTAL NOTION OF PROGRAMMING

1. A software program is commonly defined as a set of instructions, or a set of modules or procedures, that allow for a certain type of computer operation. The term is also often used interchangeably with terms like “software application” and “software product.
2. A compiled language is a programming language whose implementations are typically compilers and not interpreters. An interpreted language is a programming language whose implementations execute instructions directly and freely, without previously compiling a program into machine-language instructions
3. The main difference between algorithm and pseudocode is that an algorithm is a step by step procedure to solve a given problem while a pseudocode is a method of writing an algorithm. An algorithm is a procedure for solving a problem. In other words, it is a sequence of steps to solve a given problem.
4. The basic operations are: +, -, /, \*. (plus, minus, division, multiplication). These are the same in all languages
5. Java has six relational operators that compare two numbers and return a boolean value. The relational operators are < , > , <= , >= , == , and != . True if x is less than y, otherwise false.
6. a loop is a sequence of instruction s that is continually repeated until a certain condition is reached. ... A loop is a fundamental programming idea that is commonly used in writing programs. An infinite loop is one that lacks a functioning exit routine .
7. First, we set a variable before the loop starts (var i = 0;) Then, we define the condition for the loop to run. As long as the variable is less than the length of the array (which is 4), the loop will continue. Each time the loop executes, the variable is incremented by one (i++)
8. Statement 1 sets a variable before the loop starts (let i = 0). Statement 2 defines the condition for the loop to run (i must be less than 5). Statement 3 increases a value (i++) each time the code block in the loop has been executed.
9. Software Development Life Cycle (SDLC) is a process used by the software industry to design, develop and test high quality softwares. ... It is also called as Software Development Process. SDLC is a framework defining tasks performed at each step in the software development process.
10. The waterfall model is a classical model used in system development life cycle to create a system with a linear and sequential approach. It is termed as waterfall because the model develops systematically from one phase to another in a downward fashion.
11. The V-model is a type of SDLC model where process executes in a sequential manner in V-shape. It is also known as Verification and Validation model. ... So V-Model contains Verification phases on one side of the Validation phases on the other side. Verification and Validation phases are joined by coding phase in V-shape.
12. The Agile software development life cycle is the structured series of stages that a product goes through as it moves from beginning to end. It contains six phases: concept, inception, iteration, release, maintenance, and retirement.