Ans1 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

Ans2 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.

Ans3 An algorithm is defined as a well-defined sequence of steps that provides a solution for a given problem, whereas a pseudocode is one of the methods that can be used to **represent an** algorithm. ..

. Ans4

Mathematical Operation	Symbol to Use
Addition	+
Subtraction	–
Division	/ (forward slash)
Integer division	(backward slash)
Modulo	mod
Multiplication	*
Exponentiation	^

Ans5

>	Greater than: True if the left operand is greater than the right	x > y
<	Less than: True if the left operand is less than the right	x < y
==	Equal to: True if both operands are equal	x == y

!=	Not equal to – True if operands are not equal	x != y
>=	Greater than or equal to: True if left operand is greater than or equal to the right	x >= y
<=	Less than or equal to: True if left operand is less than or equal to the right	x <= y

Ans6 Loops are **a programming element that repeat a portion of code a set number of times until the desired process is complete**. Repetitive tasks are common in programming, and loops are essential to save time and minimize errors.

Ans7 **Using while**

```
while (condition) {
  // code block to be executed
}
```

Ans8
```
for (let i = 0; i < cars.length; i++) {
  text += cars[i] + "<br>";
}
```

Ans9 The Software Development Life Cycle (SDLC) refers to a methodology with clearly defined processes for creating high-quality software. in detail, the SDLC methodology focuses on the following phases of software development:

- Requirement analysis
- Planning
- Software design such as architectural design
- Software development
- Testing
- Deployment

Ans10 The Waterfall Model was the first Process Model to be introduced. It is also referred to as a **linear-sequential life cycle model**. It is very simple to understand and use. In a waterfall model, each phase must be completed before the next phase can begin and there is no overlapping in the phases.

The Waterfall model is the earliest SDLC approach that was used for software development.

The waterfall Model illustrates the software development process in a linear sequential flow.

Ans11 The V-model is an SDLC model where execution of processes happens in a sequential manner in a V-shape. It is also known as **Verification and Validation model**.

The V-Model is an extension of the waterfall model and is based on the association of a testing phase for each corresponding development stage. This means that for every single phase in the development cycle, there is a directly associated testing phase.

Ans12 Agile development software that is customizable for the way your team works — no matter if you follow kanban, scrum, Scaled Agile Framework® (SAFe®), or another agile methodology. Powered by modern frontend React architecture and GraphQL, extensions are lightning-fast to make and use.