PROGRAM DEVELOPMENT TOOLS

Algorithm

- After properly defining the problem, a detailed, finite, step by step procedure for solving it must be developed by the programmer called as an algorithm.

Characteristics of an algorithm

1. Input
2. Output
3. Definiteness
4. Finiteness
5. Effectiveness

KEY FEATURES OF AN ALGORITHM

- If the kettle dose not contain water, then file the kettle.
- Plug the kettle into the power point and switch it on.
- If the teapot is not empty, then empty the teapot.
- Place tea leaves in the teapot.
- If the water is not boiling, then goto step 5.
- Switch off the kettle.
- Pour water from the kettle into the teapot.

1. SEQUENCE

- Sequence means that each step or process in the algorithm is executed in the specified order.

2. DECISION

- In algorithm the result of the decision is either true or false; there is no state in between. The outcome of the decision is based on some condition that can result in true or false value.

3. REPETITION

- Repetition can be implimented using construct like repeat loop, while loopo and if then ….goto….

Repeat

Process 1

Process 2

.

.

.

Process N

Until Proposition

e.g.

Repeat

Fill water in Kettle

Until Kettle is full.

while kettle is not full

fill water in kettle.