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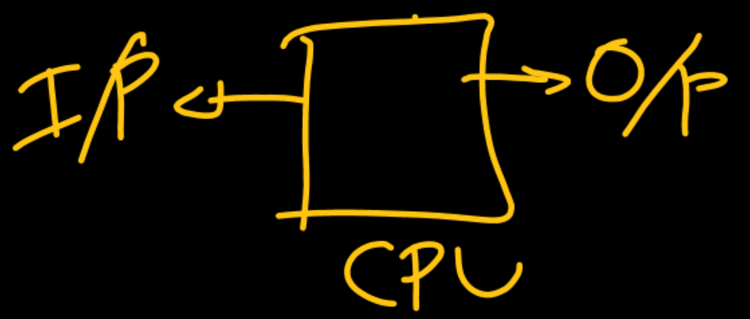
L-3

Software

Step by step process / rules

Algorithm

Chart → Flow-chart



Addition

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Algorithm + programming Language

Written Algorithm in programming Language → Code লেখা

Instruction : Algorithm এর প্রতিটি step কে Instruction বলে।

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Code: Set of Instructions (Written in PL)
Pseudo Code → Rough Code

program: set of instructions that tells a computer what to do and how to do.

software: Set of programs

Programming Language

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1G Machine Language : 0, 1 → Object Code
↓ Mnemonics
2G Assembly Language : → Source Code
↓
3G High Level " : Fortran, C, C++, Java, Java Script, Python, PHP
↓
4G Very High Level " : SQL, OOL, XQUERY
↓
5G Natural Language :

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Source Code (AL, HLL, VHLL, NL) —Translation→ Object Code (ML)

Translator:

- Assembler → AL → ML
- Compiler
- Interpreter

} HL / VHL / NL → ML

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Compiler	Interpreter
(i) সমগ্র Source Code কে একসাথে Object Code এ translate করে।	(i) Line by Line
(ii) Memory/Storage ✓	(ii) X
(iii) object code → Save	(iii) X
(iv) Fast	(iv) Slow

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Copyright ✗

Software (Source Code)

copy, edit

- Closed Source
  - IOS, Windows, Mac, Microsoft Office, Adobe, Chrome
- Open Source
  - Android, Linux, Ubuntu, VLC, Mozilla firefox, MySQL, Chromium

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Software (Function)

- System
  - (i) Operating System
  - (ii) Translator
  - (iii) Device Driver
  - (iv) Antivirus
  - (v) Compressing Software
    - Utility
- Application
  - Directly ব্যবহারকারীর কাজ/problem solve করে।

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Software কার কয়

→ Horizontal Market / Package

→ Vertical Market / Customized (HR, ERP)

শুরু / প্রতিষ্ঠান

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Bug/Error

- Syntax
- Logical Error (3000-1000) 3-1=2
- Run Time

5 → 0.2

$Y = \frac{1}{x}$

0

Garbage Input Garbage Output
(GIGO)

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