

S.P Group of Institute

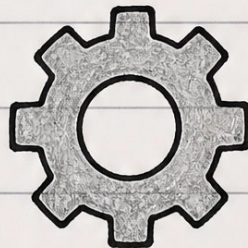
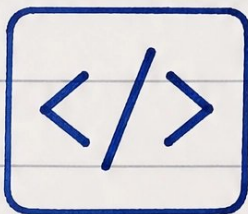
Computer Fundamental Notes

Unit 7: Software

* Topic: Software

Software instructions aur data ka ek collection hota hai jo computer ko yeh batata hai ki kya kaam karna hai aur kaise karna hai.

Hardware keval physical parts hote hain, aur software unhein chalane ke liye jaan dalta hai.



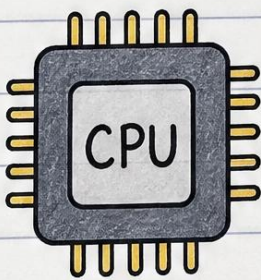
S.P Group of Institute

Computer Fundamental Notes

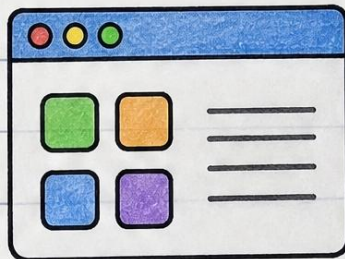
Unit 7: Software

Topic: System Software

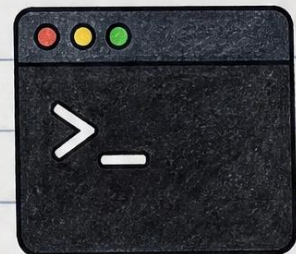
- System Software vah software hota hai jo computer ke hardware aur application programs ko manage karta hai.
- Yeh ek interface provide karta hai jisse user computer ke sath communicate kar sake.



CPU



Operating System



Terminal

S.P Group of Institute

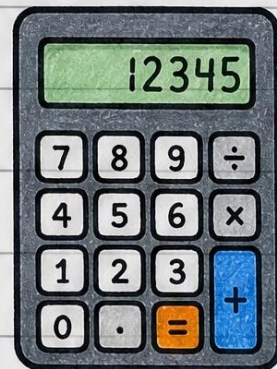
Computer Fundamental Notes

Unit 7: Software

Topic: Application Software

Application Software ve programs hote hain jo user ke specific tasks ya requirements ko pura karne ke liye banaye jaate hain.

Users inka use apne daily personal ya professional kaam ke liye karte hain.



S.P Group of Institute

Computer Fundamental Notes

Unit 7: Software

Topic: Utility Software

Utility Software system ke maintenance, optimization, aur security ke liye use kiya jata hai. Yeh computer ko fast, clean, aur viruses se secure rakhne me help karta hai.



Security



Maintenance



Cleanup

S.P Group of Institute

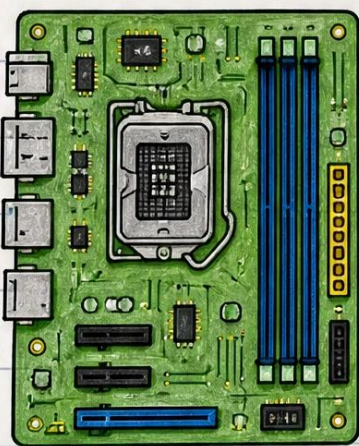
Computer Fundamental Notes

Unit 7: Software

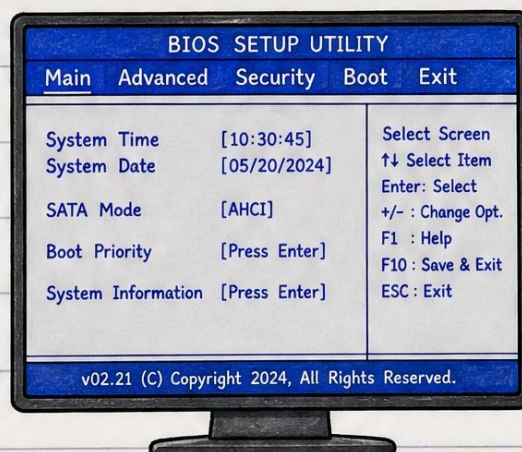
Topic: Firmware

Firmware ek permanent software hota hai jo hardware devices (jaise ROM, BIOS) ke andar permanently programmed hota hai.

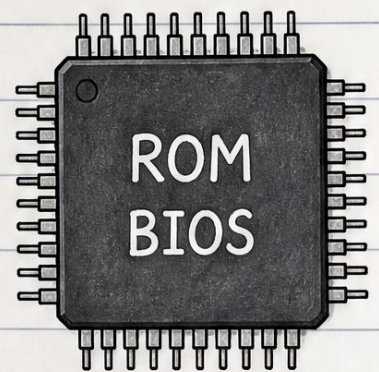
Yeh hardware aur software ke beech low-level control provide karta hai.



Motherboard Chip



BIOS Setup Screen



Microchip (ROM BIOS)

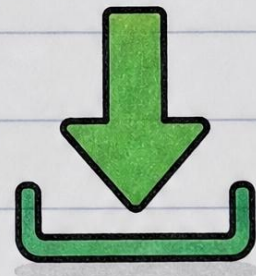
S.P Group of Institute

Computer Fundamental Notes

Unit 7: Software

Freeware

Freeware aisa software hota hai jo users ke liye bilkul free of cost available hota hai. Isko download karne aur use karne ke liye koi paise nahi dene padte.



S.P Group of Institute

Computer Fundamental Notes

Unit 7: Software

* Shareware

Shareware ek aisa software hota hai jo users ko trial basis par kuch limited time ya limited features ke sath free me use karne ke liye diya jata hai.

Trial period khatam hone ke baad use purchase karna padta hai.



Limited Time



Purchase Required



Trial Version

S.P Group of Institute

Computer Fundamental Notes

Unit 7: Software

⇒ Open Source Software ⇒

Open Source Software woh software hota hai jiska source code sabhi ke liye freely available hota hai.

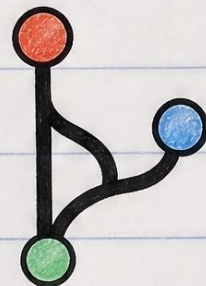
Koi bhi developer is code ko dekh sakta hai, modify kar sakta hai, aur naye features add kar sakta hai.



Open Access



Community
Collaboration



Version Control
(Git)

S.P Group of Institute

Computer Fundamental Notes

Unit 7: Software

Proprietary Software

Proprietary Software (Closed Source)
woh software hota hai jiska source
code confidential hota hai aur
company ya developer ke paas
iske copyright hote hain.



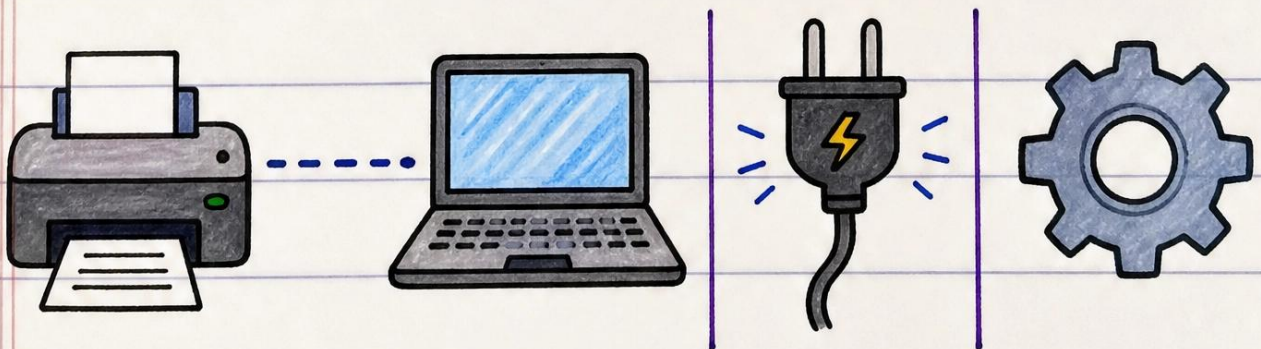
S.P Group of Institute

Computer Fundamental Notes

Unit 7: Software

Topic: Device Driver

Device Driver ek specialized system software hota hai jo computer ke operating system ko kisi external hardware device (jaise printer, keyboard) ke sath communicate karne me help karta hai.



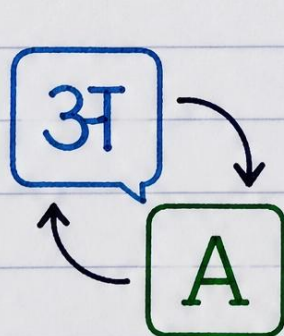
S.P Group of Institute

Computer Fundamental Notes

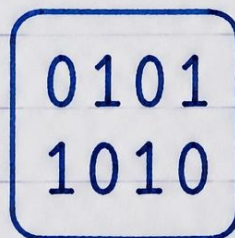
Unit 7: Software

Topic: Language Translator

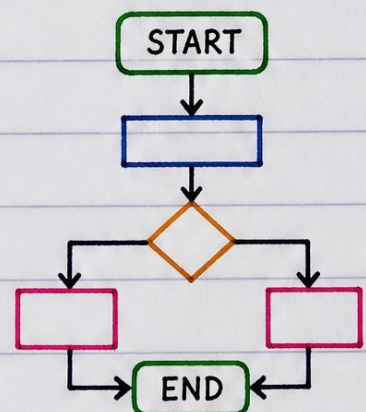
Language Translator ek system software hota hai jo high-level programming language ko machine language (binary 0s and 1s) me convert karta hai jise computer samajh sake.



Translation



Binary Code



Flowchart

S.P Group of Institute

Computer Fundamental Notes

Unit 7: Software

Assembler

Assembler ek aisa language translator hota hai jo assembly language (mnemonic codes jaise **ADD, MOV**) me likhe gaye program ko **machine language** me convert karta hai.

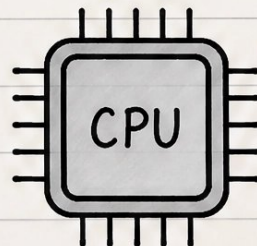
Assembly Code

```
MOV AX, B ; B → AX
ADD AX, C ; AX + C → AX
SUB AX, D ; AX - D → AX
MOV E, AX ; AX → E
```

Machine Language

```
10110001 00000010
00000011 11000001
00100010 00000100
10001010 00000101
```

CPU



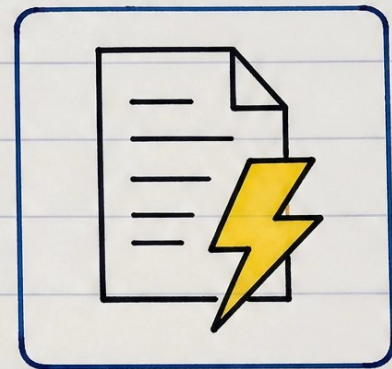
S.P Group of Institute

Computer Fundamental Notes

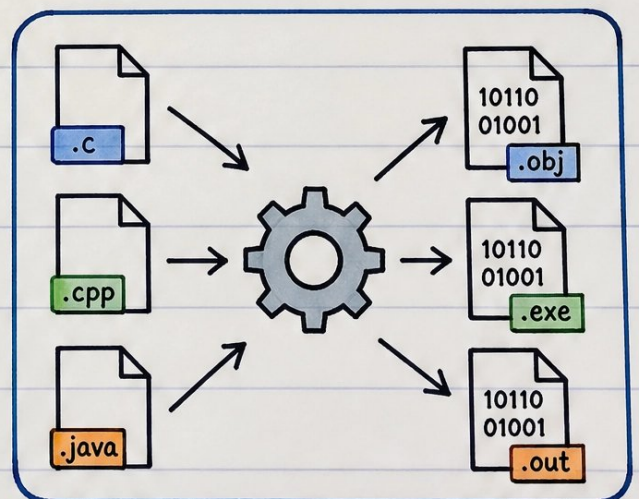
Unit 7: Software

Topic: Compiler

- * Compiler ek language translator hota hai jo poore high-level program ko ek hi baar me (ek saath) machine language me convert kar deta hai aur saari errors ki list ek saath display karta hai.



Compiler



Bulk File Conversion

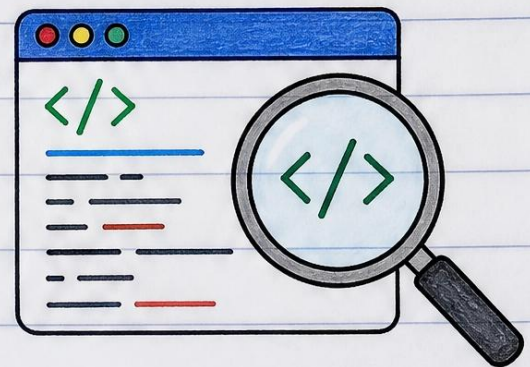
S.P Group of Institute.

Computer Fundamental Notes.

Unit 7: Software.

Topic: Interpreter.

Interpreter ek language translator hota hai jo high-level program ke code ko line-by-line (ek-ek line karke) machine language me convert karta hai aur execute karta hai.



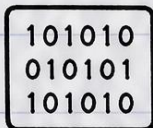
① High-level Program



② Interpreter (Line-by-Line)



③ Machine Language



④ Execute (Run)

