Chapter 1 Review:

Main components of a computer :

-Hardware:

The physical elements that execute the instructions

-Software:

Programs provide instructions for a computing system

-Date:

Heart of a computing system

Programming is:

Writing instructions for the computer to perform specific operations or exhibit a certain desired behavior.

We write programs to solve problems

We need to learn a language to write instructions

A programming language communicates instructions to a computer

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There are 3 types of Programming Langugages:

1. Machine Language

Computer programs written in binary (1s and 0s)

Defined by computer’s hardware design

Programming in machine language is slow and tedious

1. Assembly Language

English – like abbreviations ( mnemonic codes) to represent elementary operations

Translator programs ( assemblers) conver assembly to machine language

1. High – Level language

High-level Language (Java, C++, C#, Python, etc.) is a program written in a high-level language is called a source program

Translator program called compilers convert source programs in to machine language.

Byte is made of 8 bits.

Assemblers/ compilers are tools that helps us convert our code/ instructions into computer language.

Data and instructions are different in memory in a way that data is something that we handle with computers, and we handle these date with instructions given to computers.