Computer Science - Machine & Assembly

# Machine Code

## Overview

Machine code is actual instructions which a CPU will execute in raw binary of hex.

# Assembly

## Overview

Assembly code is one level above machine code and has more human readable features such as mnemonic's which are a set of symbolic names for single executable machine language instructions. For example, in x86 assembly code, JMP rel8 (assembly) => EB cb (Opcode), which is `Jump short, relative, displacement relative to next instruction`.

Assembler main ability is to define instructions and labels.

# Compiler

## Overview

Compilers take code from one language (source code) and transform it into another langauge (target code). Commonly, compilers are referenced when converting a higher level language, such as C++, into machine code to make an excutable program.