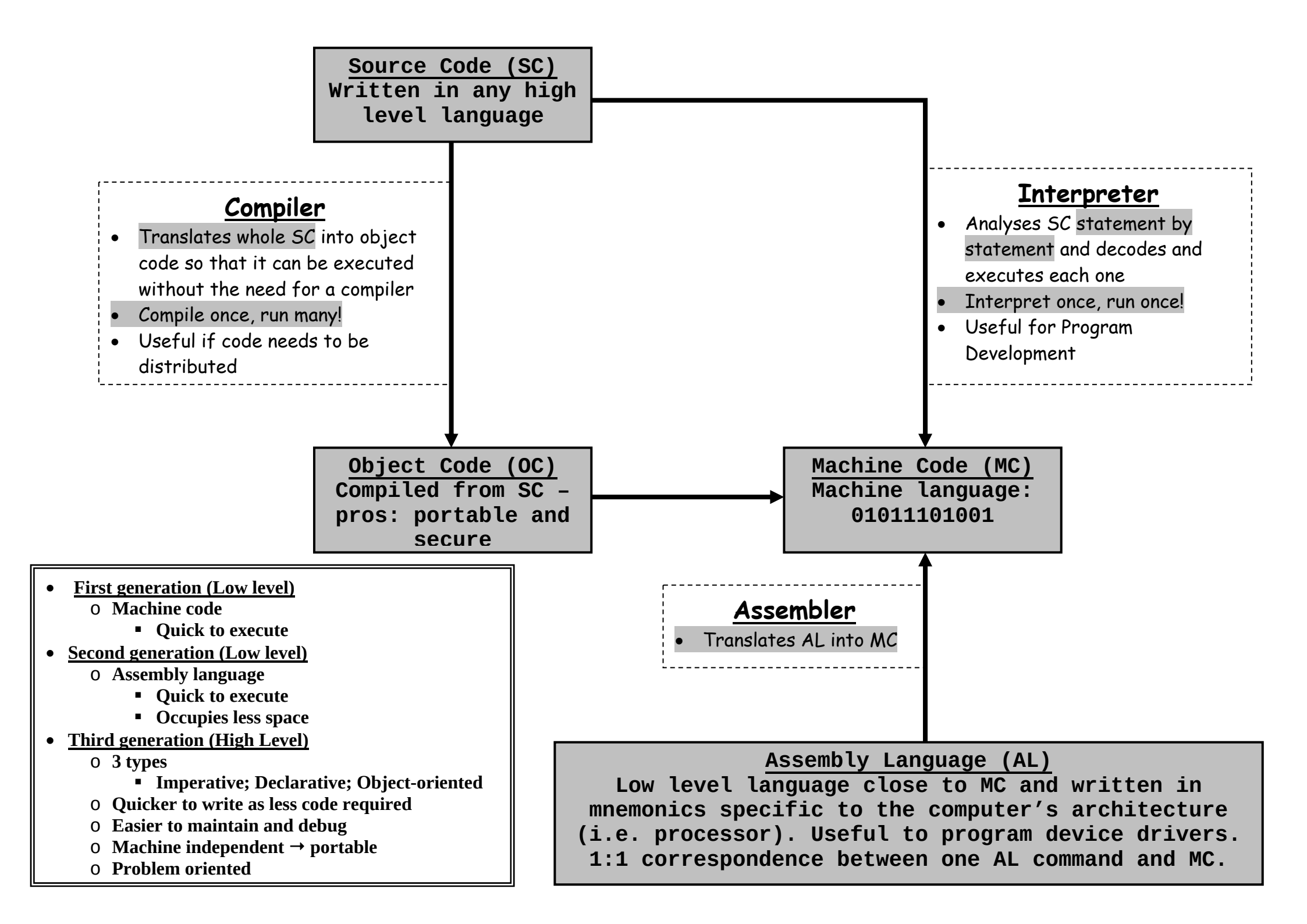
Source Code (SC)
Written in any high level language
Compiler
Translates whole SC into object code so that it can be executed without the need for a compiler
Compile once, run many!
Useful if code needs to be distributed
Interpreter
Analyses SC statement by statement and decodes and executes each one
Interpret once, run once!
Useful for Program Development
Object Code (OC)
Compiled from SC – pros: portable and secure
Machine Code (MC)
Machine language: 01011101001
Assembler
Translates AL into MC
Assembly Language (AL)
Low level language close to MC and written in mnemonics specific to the computer's architecture (i.e. processor). Useful to program device drivers. 1:1 correspondence between one AL command and MC.
First generation (Low level)
Machine code
Quick to execute
Second generation (Low level)
Assembly language
Quick to execute
Occupies less space
Third generation (High Level)
3 types
Imperative; Declarative; Object-oriented
Quicker to write as less code required
Easier to maintain and debug
Machine independent → portable
Problem oriented