

Scripting languages

Programming languages

Interpreter

Compiler

Source code

Compiler

Source code

Bytecode (P-code)

Source code

Interpreter

Interpreter (JIT)

Compiler

impure executables

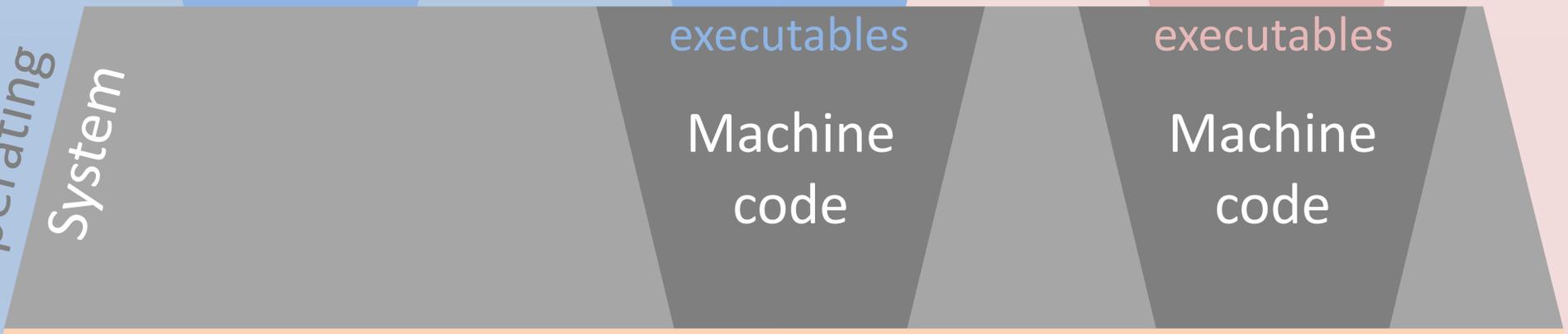
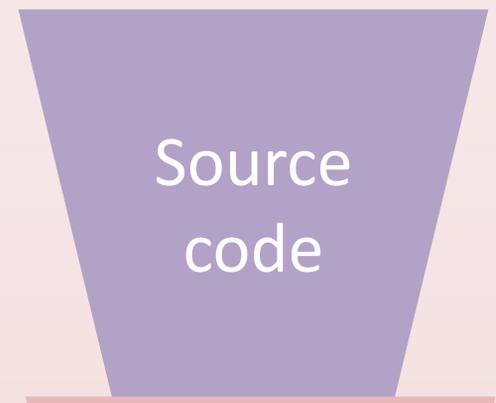
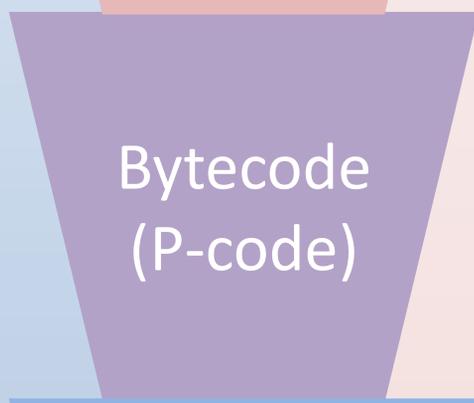
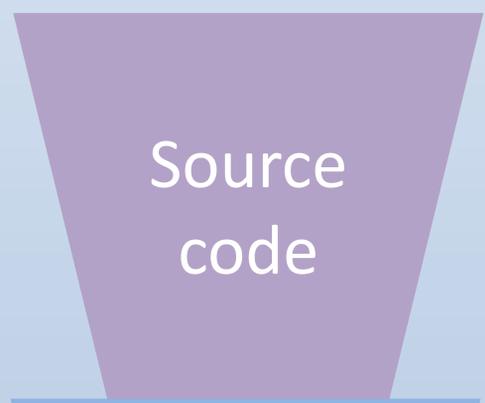
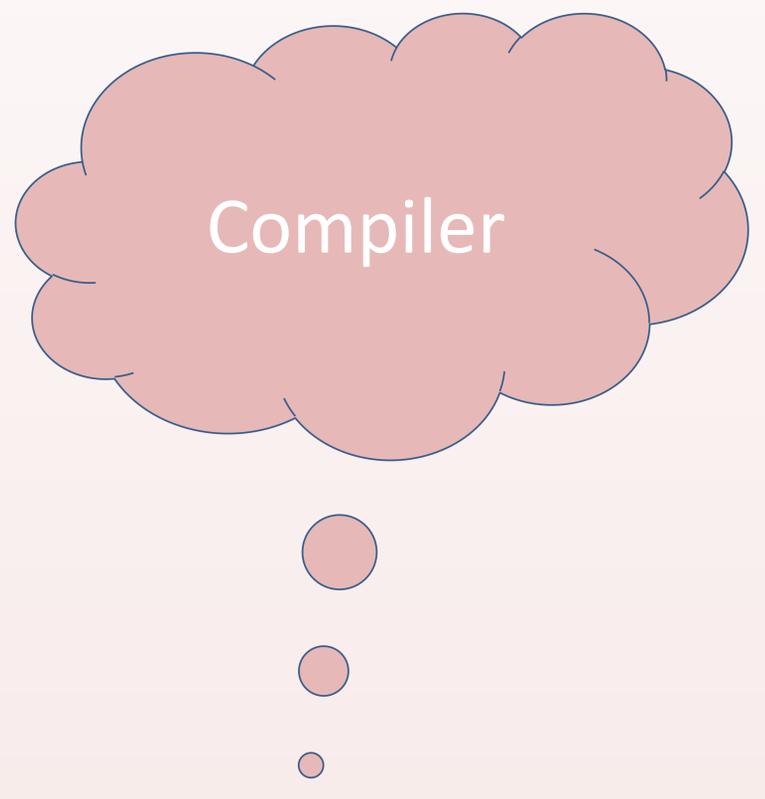
pure executables

Machine code

Machine code

Operating System

Hardware



Types of computer languages and their relationship to terms. It presents the relationship between scripting languages and programming languages and tries to highlight the relationship with the notions of interpreters and compilers. The first column from the left shows the classic case of a scripting language in which the source code is directly interpreted by an interpreter application. The middle column shows the situation often encountered today, where the source code is converted to bytecode, and then the bytecode is interpreted by an interpreter application for compatibility with the operating system and then compiled into machine code. On the right column, the classic programming languages are OS-specific, where the source code is directly converted into machine code. Note that Bytecode is a form of P-code, and it means pseudo code. Also, JIT is the Just-In-Time interpretation and compilation that a virtual machine does depending on the operating system.