

5 System Software – Part 2 —Answers

Answers

5.1 No —once compiled, the executable runs on its own.

5.2 It pauses the program at that line so you can inspect the variables (then step on or continue).

5.3 A compiler translates the whole program at once (into an executable); an interpreter translates and runs one line at a time. (Any clear difference.)

5.4 Any two: syntax highlighting, auto-complete, one-key run, a debugger, error highlighting, version control.

5.5 The bytecode is platform-independent; any computer with a virtual machine (JVM) can run it, so it does not need recompiling for each machine.

5.6 Any one: you can pause exactly where the problem is and read every variable at once, without editing the code; you can step through line by line; you do not have to add and later remove lots of print lines.

5.7 The source is compiled once to platform-independent bytecode. Each operating system has its own virtual machine that runs that same bytecode, so the one compiled file works everywhere without being rewritten or recompiled.