

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.