

12 Software Development – Part 1 — Answers

Answers

12.1 Any three, in order: requirements (analysis), design, coding, testing, maintenance.

12.2 Waterfall does each stage once, fully, in order; agile builds in small repeated cycles with frequent user feedback. (Any clear difference.)

12.3 A syntax error breaks the rules of the language so the program will not run; a logic error runs but produces the wrong result.

12.4 Boundary data: 0 or 120 (the edge values). Abnormal data: e.g. -5 , 200, or a letter —values that should be rejected.

12.5 Changing or repairing the software after release —fixing bugs, adapting it to new conditions, and improving it.

12.6 Many mistakes happen right at the edges of the allowed range (using $>$ instead of $\geq$, or being off by one). Testing the exact edge values is the most likely place to catch these errors.

12.7 Normal: e.g. 50 —checks a valid mark is accepted. Boundary: 1 or 100 —checks the exact edges behave correctly. Abnormal: e.g. 0, 101 or a letter —checks invalid input is rejected.