

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.