



ATTEMPTING QUESTIONS

(a).Identify a set of entry-exit paths to satisfy the complete statement coverage criterion

Paths in the Control Flow Graph

Path1 1-2-3-4-5(F)-34-35-36-37

Path2 1-2-3-4-5(T)-6-7-8-9(F)-11-12-13(F)-15-16-17-18(F)-20-21-23-24(F)-25(F)-30(F)-32(F)-
34-35-36-37

Path3 1-2-3-4-5(F)-6-7-8-9(F)-10-7

Path4 1-2-3-4-5(T)-6-7-8-9(F)-11-12-13(T)-14-11-12-13(F)-15-16-17-18(F)-20-21-22-

21-23-24(T)-25(T)-26(T)-27-29

b. Statement coverage criterion.

SC Path1 1-2-3-4-5(F) 34-35-36(T)-37

SC Path2 1-2-3-4-5(T)-6-7-8-9(F)-11-12-13(T)-14-9(T)-10

c. Branch coverage criterion.

BC Path1 1-2-3- 5(F) -34-35-36(T)-37

BC Path2 1-2-3-4-5(T)-6-7-8-9(F)-11-12-13(T) -14-9(T)-10

BC Path3 1-2-3-4-5(T)-6-7-8-9(F)-11-12-13(F)-15-16-17-18(T)-19-13(T)-19-13(T)-14

BC Path4 1-2-3-4-5(T)-6-7-8-9(F)-11-12-13(F)-15-16-17-18(F)-20-21-22

d. Predicate coverage

The path predicate of path1

left < right = false

1 < arr. Length = True

The path predicate of path 2

left < right = True

left < right = False

left < right = True

The path predicate of path 3

left < right = True

left < right = False

left < right = False

i < low = True

left < right = True

The path predicate of path 4

left < right = True

left < right = False

left < right = False

i < low = False