Individual Assignment

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Part A

With the number of elements inserted in an array i, the size is of the array can be well figured out with the length variable that is (arr.length) whereby length returns the total size of the array. If we have an input of 10 elements the returned size will change from 5 to 10.

ii) The time complexity is not quadratic reason is

  o (1)+ o(1)+ o(1)+ o(1)+ o(1)+ o(1)+ o(1)+

  o(1)+ o(1)+ o(n) + o(n) +o(n) +o(n)

= 9+n^4

Thus, the time complexity is n^4.

PART B

Time complexity is o(n) that is o(n)+o(1)+ o(1)+ o(1)+ o(1)+ o(1)+ o(1)+ o(1)+ o(1)

ii) A is more efficient than b since A has a higher time complexity than b.