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Homework 3

CS20B

Questions

* 1. This function is valid for only negative values of the integer parameter passed to it as argument, which means it is missing a constraint, or is constrained. (It needs to be modified to avoid endless looping in certain cases.)
  2. This is not a valid call because it is positive
  3. This is a valid call but it will return 0 case
  4. This is a valid call for the recursive method in the negative constraint space

1. 1. This solution is incorrect because it does not attempt to access the values in the array so it adds the incorrect values. It may also be missing some important constraints for boundaries.
   2. This is the correct code for iterative approach.
   3. The same explanation as above, doesn’t access array and misses the constraints.
   4. Problematic solution that does not check length of array and will lead to out of bounds errors when accessing the elements. The fix to this code should be altered to include something like if(index>=values.length).
   5. Almost correct but needs to include the smallest index out of bounds at values.length, so change to if(index>=values.length).
   6. This is the correct code for recursive approach.
   7. This works only if the user knows not to insert a value greater than or equal to the size of array. Therefore it is missing the boundary constraints. To fix this problem either changing the smaller case to index + 1, or else include further constraints in the if condition such as (index < 0 || index >=values.length)