

Problem: Given a sorted binary array, count the # of 1's in the array

Algorithm: modbin

Input: a sorted binary array A, left:=1, right:=n
Output: the total number of 1's in array A.

Start with a file named modbin and a class named modbin in Revitlib.

Method: modbin() takes in a sorted binary array A and integer left and right.

if $A[\text{left}] = A[\text{right}]$ then

 if $A[\text{left}] = 1$

 return n

 else return 0

else then

 return 0

else

fi

 [REDACTED]

$m := \lfloor \frac{\text{left} + \text{right}}{2} \rfloor$

$n := m$

 [REDACTED]

 if $A[m] = 1 \wedge A[m-1] = 0$ then

 return $n - m + 1$

 else if $A[m] = 1$ then

 return modbin(A, left, m-1)

 else if $A[m] = 0$ then

 return modbin(A, m+1, right)

 else