

F1. Binary Circles

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Input: N , which determines the 2^N number of bits on the circle and the length of the subsequences

Output: c = number of binary circles, h, j = elements of the circles in clockwise order

Variables: $nbs = 2^N$, which determines the number of N -bit strings and the number of elements in the circles

h, j, k, m = lists to hold the elements of the binary circles

c, d = count variables to hold the number of binary circles

$c1, d1$ = the concatenation of h and j , and k and m respectively, which are used to determine and eliminate duplicate binary circles.

Function: $r(c1, d1)$, which takes $c1$, rotates it, and returns $d1$

The for loops and if statements append elements to the binary circles and increment the number of binary circles. However, if $c1$ is equal to $r(c1, d1)$, the program breaks so that it ignores the rotation of a duplicate binary circle, and then continues.