NON-Recursive Implementation

//Algorithm to find the tallest candle height that occurs most frequently

//Candles is an array of size n

Algorithm birthdayCakeCandle(candles, n)

{

//Check if the array size is not positive

If(n<=0) then

return 0; //return 0 if the array is empty or invalid

//Initialize variables to track the maximum count and corresponding height

maxCount ← 0;

maximumHeight ← candles[0]; //Assume the first candle is the tallest

//Iterate through each candle height in the array to count occurrences

for i ← 0 to n do

{

count ←1; // Initialize count for the current height

//count the occurrences of current candle height by comparing with other array candles

for j ← i+1 to n do

{

//If two heights are equal, increment the count

if (candles[i] == candles[j]) then

count ← count +1;

}

}

// If the count of the current height is greater than maxCount

//updates maxCount and maximumHeight

if (count>maxCount) then

{

maxCount ← count;

maximumHeight ← candles[i];

}

//return maximum count of the tallest candle height

return maxCount;

}