

```
Let e = the empty string
Let w = {1,0}*
Es.First()
    prevstring = e
    if accepts(prevstring)
        return prevstring
Es.next()
    L = length of prevstring - 1
    if prevstring = e // COND 1: e will always return 0 as next element
        if accepts(prevstring)
            return "0";
    else
        if prevstring[L] = "1" // COND 2: find first 0 in string and replace rest with 0's
            bool = true
            while bool = true
                newL = L-1
                if prevstring[newL] = "1"
                    do nothing
                if prevstring[newL] = "0"
                    prevstring[newL] = "1" //reassign 0 with 1
                    while newL < L
                        newL = newL+1
                        prevstring[newL] = "0"
            bool = false
        if bool = true
            prevstring = string of L+1 number of 0's
            if accepts(prevstring)
                return prevstring
        else
            w.add(prevstring)
            if accepts(prevstring)
                return prevstring
    if prevstring[L] = "0" // COND 3: if ending char is 0, replace with 1
        prevstring[L] = "1"
        if accepts(prevstring)
            return prevstring
Ds.accepts()
    if prevstring in w return true
```