



# **SNS COLLEGE OF ENGINEERING**

## **Coimbatore-107**



**COURSE NAME: ANALYSIS OF ALGORITHM**

**II YEAR/ IV SEMESTER**

**UNIT – III**

**LEET CODE SOLUTION**

**Topic**

**Greedy Technique- Assigning Cookies  
(Leet Code Problem No:455)**



LAB Exercise

Leet Code : 455

Greedy Technique & Assigning cookies

Greedy factors:

→ This refers to the level of demand a child can have.

Size factors:

→ This refers to the size of cookies.

Explanation:

Given: Each child will be given a greedy factor that represents minimum size of cookies to make them satisfied.

(i) <sup>child</sup> Greedy factor = 1 ; they need small cookie (size 1 or larger than 1) to be happy.

(ii) <sup>\* Child</sup> Greedy factor = 2 ; They need slightly larger cookie (size 2 or larger than 2) to feel content.

(iii) <sup>\* Child</sup> Greedy factor = 3 ; They need larger cookie (size 3 or larger) to be satisfied.



classmate  
Date \_\_\_\_\_  
Page \_\_\_\_\_

Goal:

Assign cookies to children in such a way that (i) many children should be possible who uses available cookies of different sizes.

eg:

$g[]$  Greed factor Array =  $[3, 2, 1]$

$s[]$  Size factors of cookies =  $[2, 1]$

Step 1:

Sort Greed factor & size factors in ascending order.

$g[] = [1, 2, 3]$

$s[] = [1, 2]$

Step 2:

$i = 0$ ; pointing to <sup>index of</sup> first child (greed factor)  
 $j = 0$ ; pointing to index of first cookie (size factor).

Step 3:

check if  $s[j] \geq g[i]$ ;  $i \geq 1$   
True; Satisfy the child; Give to child  
move both pointers  $(i, j)$  to next child / next cookie

Step 4:  $i = 1$ ;  $j = 1$ .

check if  $s[j] \geq g[i]$ ; i.e.  $2 \geq 2$   
True; Satisfy the child. Give to child  
move both pointers  $(i, j)$  to next child / next cookie

