LABORATORY 01

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PROBLEM 1

Pre: Enter a String.

Post: The Reverse of the string has been outputted using recursion.

Call #	s	s[0]
1	CSisFUN	С
2	SisFUN	S
3	isFUN	i
4	sFUN	S
5	FUN	F
6	UN	U
7	N	

Returned value
NUFsiSC
NUFsiS
NUFsi
NUFs
NUF
NU
N

Time

PROBLEM 2

Pre: Enter a Number that represents natural numbers.

Post: Number of 7's in the number is outputted using recursion.

Call #	n	Isd
1	237577	7
2	23757	7
3	2375	5
4	237	7
5	23	3
6	2	2

Returned value	
3	
2	
1	
1	
0	
0	

Time

PROBLEM 3

Pre: Enter 2 Numbers that represents whole numbers.

Post: Multiplication of both numbers is outputted using recursion and without using * operation.

Call #	m	n
1	5	6
2	5	5
3	5	4
4	5	3
5	5	2
6	5	1
7	5	0

Returned value
30
25
20
15
10
5
0

Time

PROBLEM 4

Pre: Enter a number to find in Array.

Post: Whether the number input is present in the array or not is outputted as "Yes" or "No" respectively.

Call #	х	i	j	mid
1	123	0	19	9
2	123	10	19	14
3	123	10	14	12
4	123	13	14	13
5	123	13	13	13

Returned value	
find(123, A, 10, 19)	
find(123, A, 10, 14)	
find(123, A, 13, 14)	
find(123, A, 13, 13)	
True	

Time