Dashboard / My courses / CS23331-DAA-2023-CSE / Greedy Algorithms / 3-G-Burger Problem

Started on	Thursday, 29 August 2024, 10:25 AM
State	Finished
Completed on	Thursday, 29 August 2024, 10:27 AM
Time taken	2 mins 29 secs
Marks	1.00/1.00
Grade	**10.00** out of 10.00 (**100**%)

Question **1**

Correct

Mark 1.00 out of 1.00

A person needs to eat burgers. Each burger contains a count of calorie. After eating the burger, the person needs to run a distance to burn out his calories.
If he has eaten *i* burgers with c calories each, then he has to run at least $3^i * c$ kilometers to burn out the calories. For example, if he ate 3
burgers with the count of calorie in the order: [1, 3, 2], the kilometers he needs to run are $(3^0 * 1) + (3^1 * 3) + (3^2 * 2) = 1 + 9 + 18 = 28$.
But this is not the minimum, so need to try out other orders of consumption and choose the minimum value. Determine the minimum distance
he needs to run. Note: He can eat burger in any order and use an efficient sorting algorithm.Apply greedy approach to solve the problem.

Input Format

First Line contains the number of burgers

Second line contains calories of each burger which is n space-separate integers

Output Format

Print: Minimum number of kilometers needed to run to burn out the calories

Sample Input

```
3
5 10 7
```

Sample Output

```
76
```

For example:

Test	Input	Result
Test Case 1	3 1 3 2	18

Answer: (penalty regime: 0 %)

```c
#include <stdio.h>
#include <math.h>
int main(){
    int burger,i,j;
    scanf("%d",&burger);
    int cal[burger];
    for(i=0;i<burger;i++){
        scanf("%d",&cal[i]);
    }
    int temp;
    for(i=0;i<burger;i++){
        for(j=0;j<burger-(i+1);j++){
            if(cal[j]<cal[j+1]){
                temp=cal[j];
                cal[j]=cal[j+1];
                cal[j+1]=temp;
            }
        }
    }
    int kil=0;
    for(i=0;i<burger;i++){
        kil+=(pow(burger,i)*cal[i]);
    }
    printf("%d",kil);
}
```

	Test	Input	Expected	Got	

✓	`Test Case 1`	`3`
		`1 3 2`
			`18`	`18`	✓

✓	`Test Case 2`	`4`
		`7 4 9 6`
			`389`	`389`	✓

✓	`Test Case 3`	`3`
		`5 10 7`
			`76`	`76`	✓

Passed all tests! ✓

Correct

Marks for this submission: 1.00/1.00.

◄ 2-G-Cookies Problem

Jump to...

4-G-Array Sum max problem ►