

Homework 3 - Brute Force and Exhaustive Search

Part 1: Substring Search

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Welcome to Substring Search.
You'll be asked to input string and then the substring to look up:

Enter a string: Happy happy joy joy
Enter a lookup substring: happy

Do you want to match more strings? y/n: y
Enter a string: Where is the dog?
Enter a lookup substring: cat

Do you want to match more strings? y/n: y
Enter a string: fun fun fun
Enter a lookup substring: fun

Do you want to match more strings? y/n: y
Enter a string: I love coding!
Enter a lookup substring: Me too!

Do you want to match more strings? y/n: n
Number of addition operations in...

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S	U	Result
Happy happy joy joy	happy	6
Where is the dog?	cat	-1
fun fun fun	fun	0
I love coding!	Me too!	-1

```

Goodbye!

```

Part 2: Knapsack Problem

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Welcome to the KnapsackProblem using Brute Force and Exhaustive Search.

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Subset	Total Weight	Total Value
{}	0	\$0
{1,}	7	\$42
{1,2,}	10	\$54
{1,2,3,}	14	not feasible
{1,2,3,4,}	19	not feasible
{1,2,4,}	15	not feasible
{1,3,}	11	not feasible
{1,3,4,}	16	not feasible
{1,4,}	12	not feasible
{2,}	3	\$12
{2,3,}	7	\$52
{2,3,4,}	12	not feasible
{2,4,}	8	\$37
{3,}	4	\$40
{3,4,}	9	\$65
{4,}	5	\$25

```

The maximum value you can put in the knapsack is $65.
Goodbye!

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