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**Implementation design**

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**Problem 1**

10 + 20 = 30 , 3 + 0 = 3

10 + 28 = 38, 3 + 8 = 11, 1 + 1 = 2

4556465 + 57658 = 4614123, 461412 + 3 = 461412

For error catching, we will have a menu that loops until the user enters the exit option.

If they enter invalid menu options, it loops back to the menu, if they enter invalid input under an option, it returns to the menu with an error message.

Add user input = x

if x < 0

while x > 10;

Convert x to array

select last digit (LD)

temp = number [0 to count – 2]

x = LD + temp

Write line

**Problem 2**

input = user string or file content

split into character array.

Use the following resource to convert the string into a List (so that we can remove the characters we count and make the list shorter).

<https://learn.microsoft.com/en-us/dotnet/api/system.text.encoding.ascii?view=net-6.0>

Have 128 integer variables for each ascii character

Go through the list and look for duplicates.

Add 1 for each occurrence.

Remove those index positions after they have been counted.

Print out top three characters.

Print out Ascii variables with a value of 0.

Print out array in reverse.