**Problem #1 (Marks: 7)**

**Finding a substring**

Implement a function called *strstr* that returns the index of the first occurrence of a search string in a given string. You cannot use string.h header in your solution. The prototype of the function should be as follows:

**int strstr(char str[], char strSearch[])**

Where,

* *str* is the null-terminated string, within which we are looking for occurrence of a given substring.
* *strSearch* is the null-terminated substring that we are searching for.
* The return value from the function should be an integer that is the index of the first occurrence of *strSearch* in *str*, or -1 if *strSearch* does not appear in str. If *strSearch* is a string of zero length, the function returns 0.

Write necessary main() function code for input output as well.

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| --- | --- |
| **Sample Input(s)** | **Corresponding Output(s)** |
| abcdefghi  def | 3 |
| abababa  baba | 1 |
| abcdefg | 0 |
| abcde  pqr | -1 |

**Problem #2 (Marks: 3)**

**Away from Average**

In this problem, you are given an integer n, followed by n integers. You need to find the average of these integers and print out n numbers that represent the difference of respective input integers from the average of the sequence:

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| --- | --- |
| **Sample Input(s)** | **Corresponding Output(s)** |
| 10  1 2 3 4 5 6 7 8 9 10 | -4.5 -3.5 -2.5 -1.5 -0.5 0.5 1.5 2.5 3.5 4.5 |