Written Test

* This test has two sections:
* Conceptual Questions which require short answers- Total 7 Questions
* Coding Test- Total 2 Questions

Conceptual Test

* There are 7 problems in this section.
* You should work independently to solve these problems.

1. If you have to create a shopping list like the one given on this website (flipp.com), how would you approach it?
2. How is React different from Angular and VUE?

### List some of the cases when you should use Refs.

### How do you tell React to build in Production mode and what will it do?

### What are synthetic events in React?

## What is a Mixin and how to use one?

## What is Coercion in JavaScript? Give an example

Coding Test

* There are 2 problems in this section.
* You should work **independently** to solve both problems. You can use any language of your choice. It is okay if you are not able to finish both. Give your best attempt!
* Source code should be **compilable**, **runnable** and **readable**.

Problem #1

**Letter Pairs Frequency**

Given a piece of text, create a histogram of letter pairs (order from high to low). For instance, for the text, “this is a good thing”,

the letter pairs are: th, hi, is, is, go, oo, od, th, hi, in, and ng. (ignore a) The histogram will be:

th: 2, is: 2, hi: 2 go: 1, oo: 1, od: 1, in: 1, ng: 1

# Sample Input/Output:

Enter text: this is a good thing

Histogram: th: 2, is: 2, hi: 2 go: 1, oo: 1, od: 1, in: 1, ng: 1

Enter text: coooooool Histogram: oo: 6, co: 1, ol: 1

Problem #2

**Fill in the Blanks**

You are given a puzzle like this:

7 \_\_ 10 \_\_ 2

Each blank may be filled with a ‘+’ (plus) or ‘-’ (minus), producing a value k. For all combinations of plus and minus, find the value of k that is closest to 0.

In the above case, there are 4 combinations, each producing a different value:

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| 7 | + | 10 | + | 2 | = | 19 |
| 7 | + | 10 | - | 2 | = | 15 |
| 7 | - | 10 | + | 2 | = | -1 |
| 7 | - | 10 | - | 2 | = | -5 |

Of all these combinations, the value that is closest to zero is -1. So the answer is -1. If there are more than one number that is closest, print the absolute value.

# Sample Input/Output:

Enter digits: 7,10,2 Value close to zero is -1

Enter digits: 1,2,3,4 Value close to zero is 0