



SOFTWARE DEVELOPMENT INTERNSHIP 2020

[CODE TEST]

Hello! Thank you for applying to join Cloud 66 (www.cloud66.com) as a Software Development Intern.

(Job Ref: <https://apply.workable.com/cloud66/j/B8C4460740>)

As we typically have a large number of applications for our roles, we have devised a small test to help us to pre-filter applicants. Typically, this would be followed by an interview if successful. If you are still keen to pursue the role; please complete this test and submit your results (via the mechanism defined in the test below).

Valuable hint – pay attention to the **TEST RULES** – failure to do so will result in disqualification. Good luck & looking forward to your submission!

TEST RULES

1. Write the solution code in your style, using (in order of preference)
 - a. **Ruby, Go, C++, Python**
2. **DO NOT** use built-in language functionality to directly solve the problem (thereby making the solution trivial). For example:
 - a. do not use the built-in pattern matching functionality such as: **split**, **include?**, **sub**, **match** or any other regular expression method and language facilities. However; your solution may implement these methods from scratch in which case those are OK
3. You may use the *String Class* (or appropriate for your language) for storage. And you may use *String Methods* **NOT associated** with searching or matching
4. You may choose any means of accepting input and producing output, including the use of a test harness
5. This test has **no time limit** – take as long as you need to ensure that you're presenting the best solution you can; code style, readability, comments and structure will all be evaluated (assuming it all works too of course!) However please also be aware that after a reasonable time period the role will be allocated
6. **Lastly:** Remember that we will run your submission against our own additional set of test criteria; not just the ones shown here! Your code should be generalised to work against **any inputs**, and **handle errors appropriately**

QUESTION

Write an application that fulfils the following requirements:

1. Accept two strings as input:
 - a. one string is called **text**
 - b. the other is called **subtext**
2. Match the **subtext** against the **text**; outputting the **character positions** of the beginning of each match for the **subtext** within the **text**
3. **Multiple matches are allowed**
4. **Matching is case-insensitive**

ACCEPTANCE CRITERIA

Given the following *input*:

TEXT: Polly put the kettle on, polly put the kettle on, polly put the kettle on we'll all have tea

We expect the following *results*:

SUBTEXT: Polly	OUTPUT: 1, 26, 51
SUBTEXT: polly	OUTPUT: 1, 26, 51
SUBTEXT: ll	OUTPUT: 3, 28, 53, 78, 82
SUBTEXT: Ll	OUTPUT: 3, 28, 53, 78, 82
SUBTEXT: X	OUTPUT: <no matches>
SUBTEXT: Polx	OUTPUT: <no matches>

SUBMISSION

1. Please add **ALL files needed** to run your application to a **tar archive** with the title: *cloud66-internship-code-test-<candidate name>.tar*
2. The evaluator should be able to open the tar archive and run your application directly – therefore if multiple steps or external dependencies are required to run your application please include instructions for how to do these
3. Return your *cloud66- internship-code-test-<candidate name>.tar* via email as a response to the email you received this test on