Sympli Development Project

To gain a better understanding of your technical, design and logic skills, we would like you to create a web project using C#, .Net Core and frontend technology of your choice, with the following requirements.

Task

The CEO at Sympli is very interested in SEO and how this can improve Sales. Every morning he logs into google.com.au and types in the same key words "e-settlements" and counts down to see where and how many times their company, www.sympli.com.au sits on the list.

Seeing the CEO do this every day, a smart software developer at Sympli decides to write an application for him that will automatically perform this operation and return the result to the screen. They design and code some software that receives a string of keywords, and a string URL. This is then processed to return a string of numbers for where the resulting URL is found in the Google results.

For example, "1, 10, 33" or "0".

The CEO is only interested if their URL appears in the first 100 results.

Extension 1

The CTO at Sympli has become interested in this project and has added a requirement that the number of calls made to google be limited to one call per hour per search. He has proposed that you introduce caching to satisfy this requirement.

Extension 2

The CEO is impressed with your work. He would like the application to be extended so that he can see and compare results from other search engines, such as Bing. As a developer, you anticipate that further search engines may also require support in the future.

Extension 3

Please provide a brief written summary of how you would address any issues regarding performance, availability, and reliability, should they occur.

Candidate Instructions:

The problem itself is not designed to be overly complex however the expectation is that candidates will approach this as if it were a real project and deliver production quality code. When assessing this project, we will be reviewing not only that you have solved the problems as per the requirements, but **how** you have solved it and the quality of both your code and deliverable.

For applicants applying for a full-stack role, a front-end component is required.

For applications applying for a senior role, extensions 1 and 2 are mandatory.

Candidate may over-engineering certain parts of the solution to demonstrate additional skills if they so wish. Please document and explain any choices to do so clearly.

Solution design and certain technology decisions are left to the candidate's discretion however candidates would be encouraged to make decisions which align with Sympli's technology stack and development approaches where possible.

Do not use any 3ʳᵈ party libraries that are not part of the .NET framework in your solution and do not use Google Search API. If you have questions, please do not hesitate to contact us.

Note: Third party testing frameworks and DI libraries **are** acceptable to use.

Submission

Please complete the project and send your code and the final product either in a zip file, file share link, or GitHub/Bitbucket repository.