**Technical Assessment**

*Complete your details below:*

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| **Role** | .Net Developer |
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General Questions

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| *Describe what you enjoy about programming? Give examples:* I enjoy solving the real-world problems. It gives me pleasure to create a software or website that will make someone else’s day to day life easier. I also happen to love things that challenges me to think and continuously challenge me to learn something new every now and then. |
| *Describe the process you follow when writing code from requirements to delivery:*   1. Get the requirements from the client or product owner. 2. If the requirements are clear, I create user stories in Jira or Azure Boards 3. If the requirements are not clear, I book a meeting with the product owner to groom the stories and ask questions to make me understand more. 4. Once all stories and requirements are well understood, I then estimate how long each story is to take by using it story points. 5. I then book a meeting with the product owner to prioritize the stories for the upcoming sprint. To make sure I start with the most urgent features. 6. I then create a new branch from dev and name it with the story number, one story at a time. 7. Then I start coding and debugging in my newly created branch. 8. When done with each story and all acceptance criteria are met, I rebase my branch to dev branch and deploy to QA environment for testers to test. 9. When all stories are finished and all tests passed, I deploy the app to UAT, for the product owner and selected users will use and test the App. 10. If there is a bug found, I create a bug issue on Jira or Azure Board. 11. Create another branch to fix the bug, when done, I rebase it into dev and deploy to QA then UAT again. 12. When the app passed UAT, I make a back of production file and then I deploy new version to production. 13. Start planning a new sprint and redo everything from #1 |

Suggestions

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| **How the application could be improved, and possibly made more efficient:**   1. The app needs a UI to be more user friendly and to display a progress bar to show progress to a user. 2. The app must allow the user to specify the source of text whether it’s http or file path in the local machine or network. |
| **How could the application be turned into a cloud-based service?**   1. Create an Azure App-service 2. Create user interface using html and bootstrap 3. Configure azure pipelines for continuous integration and continuous delivery or download a profile setting for deployment |

Assignment:

Build an application to read the novel “War and Peace” written by Leo Tolstoy and produce a ranking of the count of the number of times each word is used in the entire book.

1. Sort the list in descending order of word count and supply the top 50 words by count;
2. Supply the top 50 words by count where the word length is longer than 6 characters;
3. The application should record and display the duration it took to execute. Please supply this with your submission;
4. Structure your solution to be generic as possible and describe what aspects make it generic;
5. Build you application in C#;
6. Comment on how the application could be improved, and possibly made more efficient;
7. Describe how the application could be turned into a cloud-based service;
8. Supply all your source code, together with your written responses to the above.

NOTES:

1. A copy of “War and Peace” may be freely downloaded here: <http://www.gutenberg.org/ebooks/2600> and <http://www.gutenberg.org/files/2600/>