

Multi Language Text Editor

^{1*} Kavita a/p Balan and ²Musab A.M. Ali

¹Faculty of Information Science & Engineering, Management and Science University, Malaysia

²Faculty of Engineering, Haliç University – Turkey

*Corresponding Author: ¹kenzie129elf@gmail.com,

²musabalrawi@halic.edu.tr

Article Info

Article history:

Article received on 15 August 2020

Received in revised form 25 August 2020

Keywords:

Text editors; English language; Malay people; Bahasa Melayu; Chinese language

ABSTRACT: The text editors that are available only enable the users to write in a single language for example in English language. Therefore, the Malaysian users who consist of 3 major ethnics such Malay, Chinese and Indian people are unable to write in their own language known as Bahasa Melayu for Malay people, Chinese for Chinese language and Tamil for Indian people. As to resolve this matter, the system provides a feature whereby the users may write text in the three languages mentioned above. Next, the text editors are text-based thus, it doesn't allow users to have image input in the content, which is why the system produce a new feature to allow users to upload image. Furthermore, users are unable to check the number of words written in the text content, instead they have to count it manually. As a solution, the system consist a feature that display the number of words written. Moreover, text editors doesn't have a feature to change the color of specific words so the system allows the user to set color for the text content rather than letting it being in a default color (black). Finally, whenever user would like to save the text content in other file formats, they are unable to do so in the existing text editors. Hence, the system comes up with a new feature that allows the user to save in plain text, word document and rich-text format.

1. INTRODUCTION

The current online based text editors only made available for major language for example English. Some example of text editors that are available in English only are collabedit by Noland,B, myTextarea by Kusters,M and darkcopy by Jason. Therefore, people in Malaysia only get to access the text editors in English mostly and they are unable to create text document in their preferred languages. Based on Malaysia's Demographics, it consists of 3 major ethnics known as Malay (50%), Chinese (22.6%) and Indian (6.7%). The 3 languages spoken by the ethnics specified are Bahasa Melayu, Chinese and Tamil. Thus the proposed text editor would support the three languages stated which enables the Malaysians to access the text editor in multiple languages. This clearly shows that the users will get to

create their text document using their own language and at the same time they also get to learn their own language in a better way.

Other than that, the users are also not able to insert image in their text files. As to resolve this issue, the proposing system consist of an image adding feature that users can make use of to make their text files easily readable because a text file that includes the pictures are much more understandable than a plain text file. Besides that, word count option is not provided for example darkcopy by Jason, so the proposing system will provide this feature as to count the words in the text content. Furthermore, the option to set text colors isn't provided by most text editors, for example collabedit by Ben Noland. Hence, the proposing system will provide this option so that the users can make their text content colorful. Apart from that, the existing text editors for

example editpad by Churm,T only enable the users to save in txt file format. It limits the users from exporting the text files in other file format. Thus, the proposing system provides the options for the users to export the text files to other file formats such as word document (doc) and rich text format (rtf) [1].

2. SYSTEM OBJECTIVE

First objective is to provide a feature for users to create text document in multiple languages within a single file. The languages offered are Bahasa Melayu, Tamil and Chinese. The next objective is to produce a new feature for users to upload images in text editor as to support the text being created. The type of image file formats that are allowed are Joint Photographic Experts Group (jpeg), Portable Network Graphics (png) and Graphics Interchange Format (gif). Thirdly, to create a feature to count the number of words written in the text content. Fourthly, to allow the users to set color for the text content. The last objective is to come up with a feature for users to access text files in other formats than plain text(txt) such as word document(doc) and rich text format(rtf).

3. LITERATURE REVIEW

Online text editors have limited the users from creating their text files in their own language. It only comes with major language option such as English and Arabic. The example of text editors are collabedit by Noland,B for English language and yamli by Habib Haddad,H for Arabic language [2]. The Malaysian users are unable to create text document in their own language due to the language limitation. This can relate with the situation in Malaysia whereby there are three major ethnic groups which consists of Malay, Indian and Chinese people who are not able to produce text files in their preferred languages. Moreover, users can only use text without having the input of image in their files so all the time they view the text files being created, that doesn't provide a better understanding about the content without involvement of the pictures. One of the example of text editor that doesn't have the image adding feature is collabedit by Noland,B [3]. Furthermore, users are unable to see the word count of their text content so they have to do it manually through counting it by themselves. One of the examples of text editor is darkcopy by Jason [4]. Not only that, users are restricted from setting colors to their text content, instead it has just been made to be in default color(black). Example of text editor that doesn't have this option is editpad by

Churm.T [5]. Additionally, users are only able to access their files in txt format which is really troublesome as whenever they would like to access the file in other formats, they are not able to do so. Thus, it makes the user to re type the content of their text files in other file formats which is time consuming. The example of text editor that only enable users to export in txt format is mytextarea by Kusters,M. [6].

Features	Multi-language	Uploading image	Word count	Setting text color	Exporting to other formats
editpad	No, only English	No, only text	Yes, displays number of words written	No, only default color (black)	No, only to txt
myTextarea	No, only English	No, only text	Yes, displays number of words written	No, only default color (black)	No, only to txt
Darkcopy	No, only English	No, only text	No, doesn't display number of words written	No only default color (black)	No, only to txt
Collabedit	No, only English	No,only text	No, doesn't display number of words written	No only default color (black)	No, only to txt
aNotepad	No, only English	Yes, can upload image	Yes, displays number of words written	Yes to set other colors	Yes to txt, doc and rtf
System	Yes, in Bahasa Melayu, Tamil & Chinese	Yes, can upload image	Yes, displays number of words written	Yes to set other colors	Yes to txt, doc and rtf

4. METHODOLOGY

The methodology that is applied is Agile Unified Process which consists of 4 phases such as:

A. Inception phase

Identify the requirement Multi Language Text Editor by comparing with other similar products and determine the duration needed to develop the proposing system. Comparison has been made between 5 products such as darkcopy, myTextarea, aNotepad, collabedit and editpad and a solution (system) that consist of the major features required by the user such as language, uploading image, color, word count and SaveAs options provided [7].

B. Elaboration phase

Provide the design of Multi Language Text Editor which consists of UML diagrams using Visual Paradigm that clearly states the methods required and finalize the system design by regularly consulting with the supervisor.

C. Construction phase

Begin source code development of Multi Language Text Editor with Netbeans by providing the appropriate functions for the features implemented. In this phase, development for each feature such as Language, Upload Image, Word Count, Text Color and SaveAs were performed.

D. Transition phase

Test Multi Language Text Editor to ensure that all the features are fully functioning and are error free. User acceptance testing was conducted by distributing the jar file to the selected users. Finalize the system creation by providing all the documentation that are produced and ensure the system reach its target users who are Malaysian people.

5. RESULTS

The test for MultiLanguage Text Editor was performed by giving out the system and questionnaires to 68 people through Facebook account. As predicted and expected, the result was really convincing because the users are satisfied with the features provided and that the objectives are achieved. The following are the result of the testing conducted in which pie chart shows the responds given for each of the questions asked. Question 1: Do you commonly use English language to create a text document as there's no BM, Tamil or Chinese language available? Figure 1 shows the analysis of Question 1.

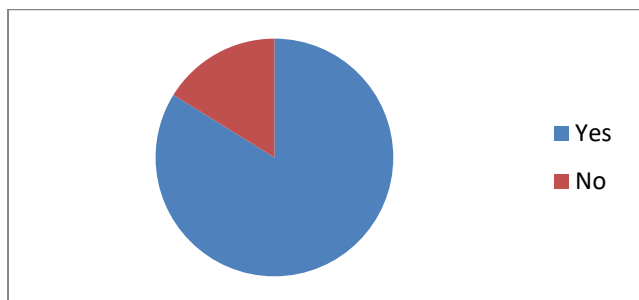


Figure 1. Analysis of Question 1

Based on the analysis made, 84% of respondents prefer to use the English text editor since text editor for Bahasa

Melayu, Chinese and Tamil is not available whereas 16% prefer to use the existing English text editor as they are use to write in English only. Question 2: Would you prefer to use if a text editor provides multiple languages such as Bahasa Melayu, Tamil and Chinese? Figure 2 shows the analysis of Question 2.

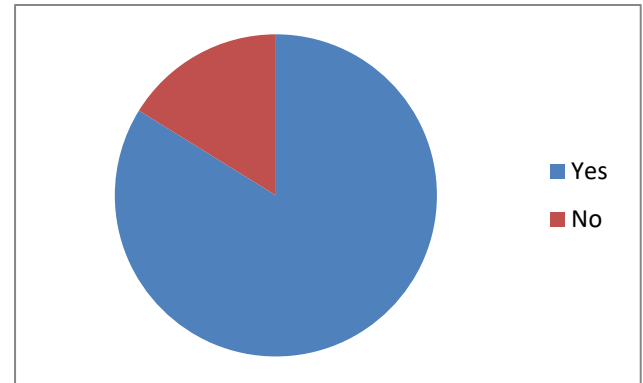


Figure 2. Analysis of Question 2

84% of the respondents would like to use if the text editor is made available in Bahasa Melayu, Tamil and Chinese as they can write in any of the 3 preferred languages whereas only 16% of respondents prefer to use the existing text editor which is only available in English. Question 3: Would you just prefer to create a plain text document (without uploading image to support your text content written)? Figure 3 shows the analysis of Question 3.

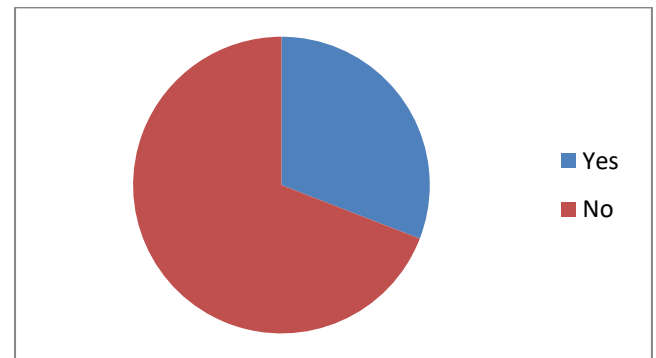


Figure 3. Analysis of Question 3

Based on the analysis made, 69% of respondents don't prefer to create a text content without uploading image in order to support the text content written and 31% of respondents would rather create a plain text content. Question 4: Would you prefer to create a text document that enables you to upload image as to support the text content written? Figure 4 shows the analysis of Question 4.

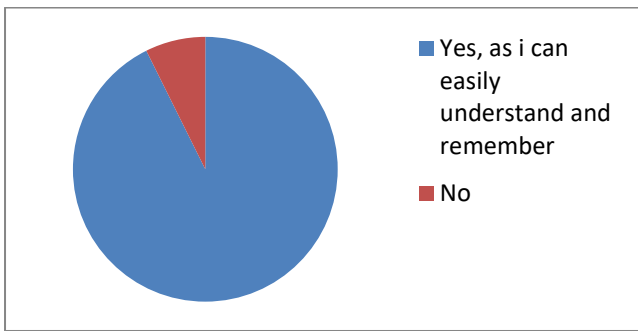


Figure 4. Analysis of Question 4

The pie chart shows that 93% of respondents require uploading image into their text content so that they can easily understand and remember whereas only 7% prefer to create a plain text content without the support of image in the text content.

Question 5: Do you usually count the number of words written manually? Figure 5 shows the analysis of Question 5.

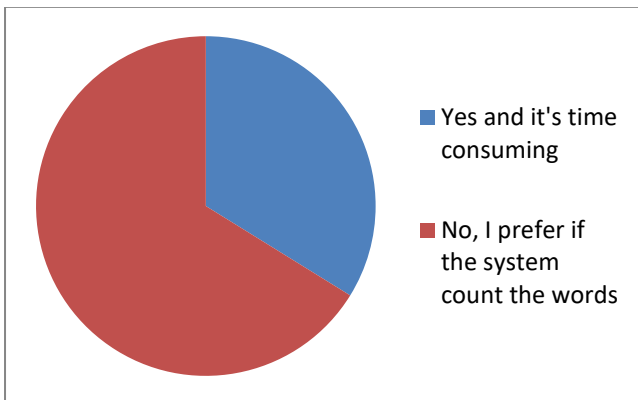


Figure 5. Analysis of Question 5

Based on the pie chart, 34% of respondents tend to count the number of words manually as there is no option to make the system count automatically whereas 66% of respondents don't count manually, instead they prefer if the system count the words.

Question 6: Do you prefer if the system count the number of words written in the text content? Figure 6 shows the analysis of Question 6.

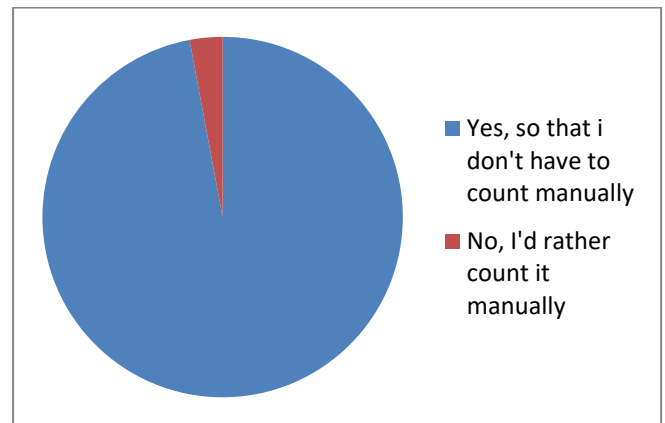


Figure 6. Analysis of Question 6

According to the result, 97% of respondents gladly prefer the system to count the number of words written as they don't have to count it manually and only 3% of respondents unexpectedly would like to count the words manually without the need of system's assistance to count it.

Question 7: Would you like your text content to be in default color (black)? Figure 7 shows the analysis of Question 7.

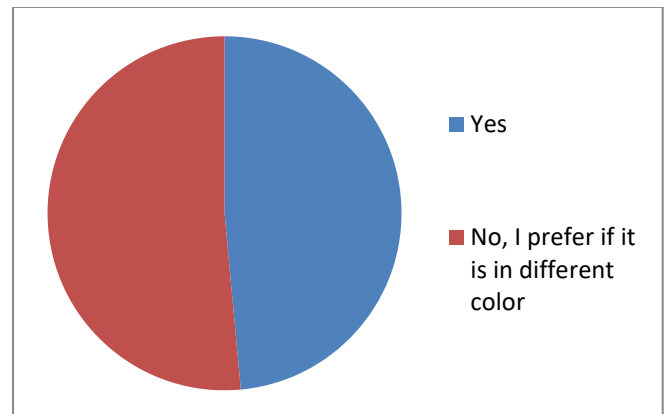


Figure 7. Analysis of Question 7

The pie chart shows that 49% of respondents require the text content to be in default black color and 51% of respondents which is more than half of the respondents don't prefer the text content to be in black, instead they prefer different colors.

Question 8: Would you like your text content to be in different colors than black? Figure 8 shows the analysis of Question 8.

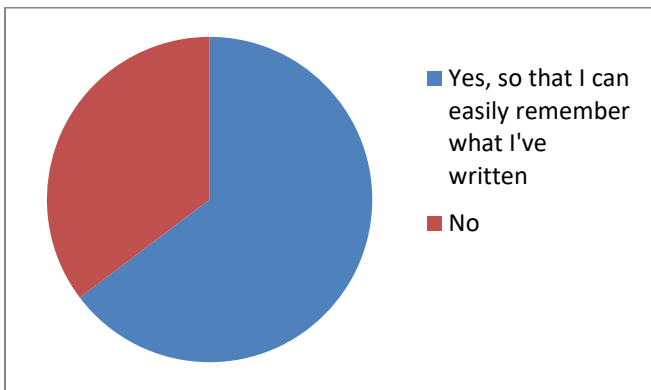


Figure 8. Analysis of Question 8

From the result of question 8, 65% of respondents like the text content to be in different colors than black so that they can easily remember the written text whereas only 35% of respondents would rather prefer their text content to be in black.

Question 9: Do you usually save your text content in plain text format (.TXT)? Figure 9 shows the analysis of Question 9.

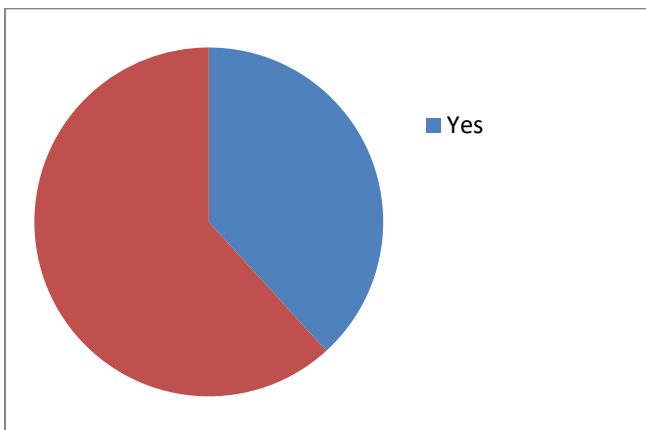


Figure 9. Analysis of Question 9

Based on the result, 38% of respondents would rather prefer to save their text content in plain text format whereas 62% of respondents wouldn't like to only save in plain text format as they can't access from different applications such as WordPad or Microsoft Word.

Question 10: Do you prefer to save your text content in different file formats such as word document (.DOC) or rich-text format (.RTF)? Figure 10 shows the analysis of Question 10.

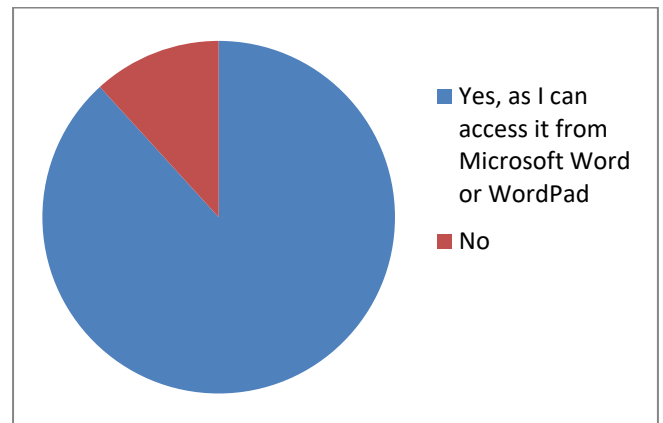


Figure 10. Analysis of Question 10

According to the result for Question 10, 88% of respondents prefer to save the text content in different file formats such as word document and rich text format so that they can access it from Microsoft Word or WordPad but only 12% of respondents aren't interested in saving in other file format.

6. CONCLUSION

Choosing a system to be developed rather than a mobile application is quite challenging as it requires extensive research and knowledge instead of creating a mobile application because usually it consists of framework that can be referred to. The system will ease the Malaysian users in creating their text documents in various ways as it would provide the option for the users to create texts in the preferred languages such as Bahasa Melayu, Tamil and Chinese. Apart from that, users won't have to re type the texts in other applications since the proposed system will provide the feature to export their text files to other file formats and it also enables the users to upload images to be included in their text files. Other than that, the users can eliminate the need to count the words written manually as the system would perform the action when users click on the word count feature. In a nutshell, the system will serve the purpose in order to fulfill user's expectation that is simpler yet has the major functionalities which can be utilized by users to create text files.

REFERENCES

- [1] Miguel (2015, June 30). Retrieved from www.indexmundi.com/malaysia/demographics_profile.htm
- [2] Habib Haddad,H. (2009). Yamli. Retrieved from www.yamli.com
- [3] Noland,B. (2008).dr8h3-collabedit. Retrieved from <http://collabedit.com/dr8h3>
- [4] Jason. (2006). Darkcopy. Retrieved from darkcopy.com
- [5] Churm,T. (2002). Edit Pad. Retrieved from www.editpad.org
- [6] Kusters,M. (2009). myTextarea. Retrieved from <http://www.mytextarea.com/>
- [7] T.Vannet. (2009, Oct). aNotepad. Retrieved from <https://anotepad.com/>
- [8] Lee,X. (2015, February 14). *Unicode Basics*.
- [9] Dubey,A. (2012, April 24). *How to Upload Image in Java Application*.
- [10] G.Goutham. (2012, October 9). Word Count in Java.
- [11] G.Goutham. (2013, November 8). JColorChooser in Swing.
- [12] Makkar.R. (2013, May 8). Complete Guide to JFileChooser