Assignment One–System Evaluation (Assessed Group Work)

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Number of Credits: 15% of a 20 credit module
Recommended hours: approximately 30 hours per group member
Interim Deadline: Friday 23 October 2009 by midnight. The minutes protocol (meeting notes) from the first group meeting is due.
Submission Deadline: Friday 30 October 2009 by midnight

1 Problem Statement

LaTeX is a high-quality typesetting system. It is an application designed for the production of technical and scientific documentation. LaTeX is the *de facto* standard for the communication and publication of scientific documents. LaTeX is available for free.

Given a LaTeX application, Texmaker, your task is to evaluate this application from a user-centered point of view. Texmaker is a free LaTeX editor, that integrates many tools needed to develop documents with LaTeX, in just one application. Texmaker runs on Unix, Mac OSX and Windoze systems and is released under the GPL license. A sample screen shot of the application is provided in Figure 1. A link to this application is also provided on the module web page. You will be given guidance in the lectures on how to evaluate such an application.

2 Task: User-Centered Software Evaluation

Each group is required to write a **Software Evaluation Report** that answers the questions given in the Evaluation Questions Section (Section 4).

Obviously, answering all of these questions is too large of a job for a single person. That is why the task can be divided up amongst the group members. How the coursework is divided up is up to the individual group members, however we suggest that each member of the group writes a subsection of the evaluation report.

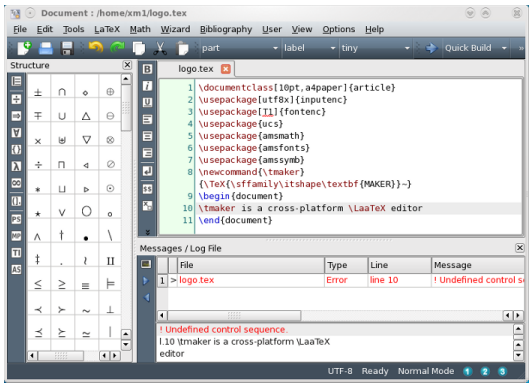

Figure 1: A screenshot from the LaTeX Texmaker application you are to evaluate. From: *http://www.xm1math.net/texmaker/*

In addition to the Evaluation Report, you are required to hold at least one group meeting and follow *Bob's Minutes of Meeting Protocol*. See the module web page for a copy of this document. At least one minutes of meeting must be emailed to Bob by the given interim deadline, before your group submits their assignment.

Sample LaTeX and BibTeX files are provided on the module web page as well.

3 Submission

Submission via Blackboard follows the normal procedure where one person from the group submits the group work under their name. Each group is required to submit the following:

1. **Software Evaluation Report (70%):** A copy of your Software Evaluation Report via black-

board by the deadline. The file should be called *"GroupNevaluationReport.pdf"* where N is replaced by your group number. PDF format is strongly encouraged. Open Office Document Format (.odt) is also good. Word document format (.doc) is not acceptable. See the following URL to convert word document format to PDF: http://cs.swan.ac.uk/˜csbob/teaching/cs124-tutorial/

Again, one report is submitted per group on behalf of that group. Someone from the group is chosen to submit the report under their name.

2. **Minutes Protocol (20%) with Interim Deadline:** A copy of (each of) your group meetings minutes held before the assignment deadline. Your minutes files should be called *"GroupNminutesDmonYR.txt"* where N is replaced by your group number, D is replaced by the calendar day your group met, Mon indicates the month that the group met, and YR indicates the year, e.g., $Group1minutes23oct09.txt$. (You will be assessed on this.) Save the original notes that you sent as a text (.txt) file and upload it to Blackboard. A minimum of one minutes of meeting protocol is required and is submitted on behalf of the group by one of its members. *This file has a special interim deadline before the other files*. See the interim deadline above.

3. **Group Report (10%):** A short description of what and how each group member contributed to the assignment. The file should be called *"GroupNmemberContributions.txt"* where N is replaced by your group number. The description should indicate which group member(s) contributed to which sections of the evaluation report. Only one group report is submitted per group. (10%)

References

[1] H.X. Lin, Y. Y. Choong, and G. Salvendy. A Proposed Index of Usability: A Method for Comparing the Relative Usability of Different Software Systems. *Behaviour & Information Technology*, 16(4/5):267–278, 1997.

4 Software Evaluation Questions

Each answer must give a numeric ranking (1 = very bad, 2 = bad, 3 = below average, 4 = average, 5 = good, 6 = Very good, 7 = excellent, and a short qualitative (1-5 sentences) providing more detail. Write in complete sentences. (Questions are from the "Purdue Usability Testing Questionnaire" [1])

Compatibility

1. Is the control of cursor compatible with movement?
2. Are the results of control entry compatible with user expectations?
3. Is the control matched to user skill?
4. Are the coding compatible with familiar conventions?
5. Is the wording familiar?

Consistency

6. Is the assignment of colour codes conventional?
7. Is the coding consistent across displays, menu options?
8. Is the cursor placement consistent?
9. Is the display format consistent?
10. Is the feedback consistent?
11. Is the format within data fields consistent?
12. Is the label format consistent?
13. Is the label location consistent?
14. Is the labelling itself consistent?
15. Is the display orientation consistent? – panning vs. scrolling.
16. Are the user actions required consistent?
17. Is the wording consistent across displays?
18. Is the data display consistent with entry requirements?
19. Is the data display consistent with user conventions?
20. Are symbols for graphic data standard?
21. Is the option wording consistent with command language?
22. Is the wording consistent with user guidance?

Flexibility

23. Does it have by-passing menu selection with command entry?
24. Does it have direct manipulation capability?
25. Is the design for data entry flexible?
26. Can the display be controlled by user flexibly?
27. Does it provide flexible sequence control?
28. Does it provide flexible user guidance?
29. Are the menu options dependent on context?
30. Can user name displays and elements according to their needs?
31. Does it provide good training for different users?
32. Are users allowed to customize windows?
33. Can users assign command names?
34. Does it provide user selection of data for display?
35. Does it handle user-specified windows?
36. Does it provide zooming for display expansion?

Learnability

37. Does it provide clarity of wording?
38. Is the data grouping reasonable for easy learning?
39. Is the command language layered?
40. Is the grouping of menu options logical?
41. Is the ordering of menu options logical?
42. Are the command names meaningful?
43. Does it provide no-penalty learning?

Minimal Action

44. Does it provide combined entry of related data?
45. Will the required data be entered only once?
46. Does it provide default values?
47. Is the shifting among windows easy?
48. Does it provide function keys for frequent control entries?
49. Does it provide global search and replace capability?
50. Is the menu selection by pointing? –primary means of sequence control.
51. Is the menu selection by keyed entry? –secondary means of control entry.
52. Does it require minimal cursor positioning?
53. Does it require minimal steps in sequential menu selection?
54. Does it require minimal user control actions?
55. Is the return to higher-level menus required only one simple key action?
56. Is the return to general menu required only one simple key action?

Minimal Memory Load

57. How are abbreviations and acronyms used?
58. Does it provide aids for entering hierarchic data?
59. Is the guidance information always available?
60. Does it provide hierarchic menus for sequential selection?
61. Are selected data highlighted?
62. Does it provide index of commands?
63. Does it provide index of data?
64. Does it indicate current position in menu structure?
65. Are data items kept short?
66. Are the letter codes for menu selection designed carefully?
67. Are long data items partitioned?
68. Are prior answers recapitulated?
69. Are upper and lower case equivalent?
70. Does it use short codes rather than long ones?
71. Does it provide supplementary verbal labels for icons?

Perceptual Limitation

72. Does it provide coding by data category?
73. Is the abbreviation distinctive?
74. Is the cursor distinctive?
75. Are display elements distinctive?
76. Is the format for user guidance distinctive?
77. Do the commands have distinctive meanings?
78. Is the spelling distinctive for commands?
79. Does it provide easily distinguished colours?
80. Is the active window indicated?
81. Are items paired for direct comparison?
82. Is the number of spoken messages limited?
83. Does it provide lists for related items?
84. Are menus distinct from other displayed information?
85. Is the colour coding redundant?
86. Does it provide visually distinctive data fields?
87. Are groups of information demarcated?
88. Is the screen density reasonable?

User Guidance

89. System feedback: How helpful is the error message?
90. Does it provide CANCEL option?
91. Are erroneous entries displayed?
92. Does it provide explicit entry of corrections?
93. Does it provide feedback for control entries?
94. Is HELP provided?
95. Is completion of processing indicated?
96. Are repeated errors indicated?
97. Are error messages non-disruptive/informative?
98. Does it provide RESTART option?
99. Does it provide UNDO to reverse control actions?
100. Is the sequence control user initiated?