ÇANKAYA UNIVERSITY FACULTY OF ENGINEERING SOFTWARE ENGINEERING DEPARMENT

SENG 200

SUMMER INTERNSHIP REPORT

Name Last Name ID Number

Performed at
Name of the Firm

Beginning and End dates

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Abstract

You should provide a short (no more than 150 words) abstract in your report. This abstract should describe your internship in a few sentences: mainly stating where, what you have done and what you learned. Just a general description.

1. Introduction

You should be using relevant styles defined in this template. For example you should use H1 for top-level Section headers and TEXT style for the normal text.

In the introduction section you should make a smooth beginning to the document. This section should include the following information:

- The name of the company and department where you have done your summer internship, the
 main focus area of the company, and your motivation for choosing this company as the place
 for your summer internship.
- Brief summary of the work you have done, the motivation behind it, and the significance of the work that you have done in the overall project.
- Explanation of the organization of the rest of the report.

2. Company Information

Have a section providing detailed information about the company and department where you performed your internship, its hardware/software systems and resources, its focus and project area, its organization, etc. The name, address, telephone number, email address, and information about the education of your supervisor must be given (including the name of the university and department from which he/she graduated, and the year of graduation). Additionally, you must list the names of your team members and their backgrounds. If you have worked with other interns from for example Industrial Engineering please write this information, as this can be considered as an evidence for multi-disciplinary work.

3. Work Done

The number of sections in this part, their titles, and contents depend on the work that you have done and the information you would like to provide. However this part should be at least 1000 words. It should explain the work you have done in your internship and should be consistent with your journals.

3.1. X Project

You can use sub-sections to describe different tasks you were assigned to. You are expected to discuss in detail the work you have done, including for example;

- The algorithms/pseudo-code developed.
- Hardware/software environment used.

- Software tools used.
- Design methods used and learned.
- Testing methods and tools used and learned.
- Project management methods and processes followed or observed.
- Any engineering standards that are followed or observed.
- Design, development, documentation and testing participated in or observed.
- Any training received, including seminars attended.
- Any configuration and/or maintenance tasks performed.

3.1.1. Describing code work

Giving details about a system you have developed is a great idea for your internship report. While this is encouraged, do not just give a figure showing the full source code of the program you have developed. Source code is for compilers or programmers they do not belong in a high level report similar to internship report. However if you really feel as you must include source code, you can use the Appendix section.

In your report you can use Unified Modelling Language (UML) diagrams [1] or simple pseudocode outlining the work you have done. If the company forbids you to include sensitive information, you should try to add some information that will give us (the evaluators) some sense of what you have done.

3.1.2. Observations are important as well

While the best way to learn is by doing, you may not always get the chance. So, instead of your experience you can add to your report your observations. Software engineering and the methodologies used in the companies are very important, which you should get used to. Try to understand how the work is done, who decides what to do? How do they discuss it? How do they design it? How is the quality ensured? Try to figure out the roles and duties. When you are writing about the tools or technology do not focus on what they are, but try to justify their use. It is important for you to notice the management and software engineering skills required in your future careers.

3.1.3. Write about your ideas

You might have received some training during your internship. You can and should discuss the topic you learned. However do NOT just restate what others told you or repeat information you can get from a textbook or other source. Personalize the content by discussing what the topic means for the company, or for a person like you who will pursue a career in software engineering.

3.2. Using references

When you are describing the work please keep in mind that you are not expected to teach a certain technology. The expected content in this section is more focused on the thing <u>YOU</u> have done or noticed/observed during your internship. Please DO NOT borrow (plagiarize) any content from books, Wikipedia, Internet web sites directly and copy-paste it as if it is your own ideas. Not only will your internship be rejected, but also you will commit a punishable offense [1].

While directly copying from such resources is strictly disallowed you can refer to them and use material with proper citation. For example while preparing the internship documentation we have taken advantage of two journal articles Ziegler [2] and Massengale [3]. You can also use books as references [4]. While you can use web sites and Wikipedia articles as well please try to make sure that the information contained in them are accurate. You will be surprised by possible mistakes or false information in these articles, at one point David Beckham was a Chinese goalkeeper in the 18th century [5]. Your references section should only contain sources you have used in your text and nothing else.

3.3. Use figures to discuss, not decorate!

Figures can be a great way to explain a topic, when used wisely. For example if you have programmed an application with user interface you can add some screenshots to describe the application. You should use refer to the figure from the text. Always put a caption to your figure, by right clicking the image and selecting "Insert caption". You can use the "cross-reference" feature of MS Word to reference to your figure from the text (you can find it from REFERENCES tab).



Figure 1 Gameplay of shuffling letters game

For example if I am going to describe a game interface, I would first start with what the game is. Shuffling Letters, is a scrabble like word game that can entertain you for hours. The aim of the

game is to create minimum 3 letter Turkish words and reach to the highest score. Figure 1 shows the game's interface. In the white area middle of the screen 9 letters appear at a time during the game. If a letter, for example letter R in the figure, is unused for a period it shuffles and a new letter replaces it. Longer words provide higher scores. Score for a word is calculated by summing the score of letters shown on their right bottom corner, and multiplying this score by the reward related to the length of the word. For example if the word is "CİNLİK" its score will be 6*4.

Do not use too many figures, use them if you really think that they make the explanation more complete or clear! Excessive use of images will only distract the reader.

3.4. Consider the grading criteria

You should write your report according to the grading criteria. In your reports we are expecting to see engineering qualifications. Consider the following 12 qualifications;

- 1. Demonstrates the ability to apply mathematics, science and engineering subjects to model and solve engineering problems.
- 2. Demonstrates the ability to identify, formulate and solve complex engineering problems.
- 3. Demonstrates the ability to select and apply appropriate analysis and modelling methods.
- 4. Have built a complex system, process, device or a product.
- 5. Have used information technologies effectively.
- 6. Demonstrated ability to select, devise or use modern techniques and tools.
- 7. Have conducted experiments, gathered data and interpreted results investigating an engineering problem.
- 8. Demonstrated good communication and presentation skills both orally and in writing.
- 9. Have independently researched and learned by educating him/herself.
- 10. Recognized professional and ethical responsibilities.
- 11. Observed and participated in business life practices such as project management, risk management and change management.
- 12. Demonstrated observations and knowledge about contemporary issues, global and societal effects of engineering practices.

You should write any evidence related to these criteria. Remember that you will get grades according to these criteria. You should make note of which pages you report relevant activities related to these qualifications so that you can write it to your "Student Self Evaluation Survey".

4. Conclusion

Have a conclusion section where you summarize the work you have done. Clearly re-state your contribution, what you have learned, experienced and acquired. Be specific in relating these to what you have learned at Çankaya University.

References

- [1] Cankaya University, "ÇANKAYA ÜNİVERSİTESİ ÖN LİSANS VE LİSANS EĞİTİM VE ÖĞRETİM YÖNETMELİĞİ," 2013.
- [2] W. L. Ziegler, "Highly structured internship and cooperative education program in computer science," *ACM SIGCSE Bulletin*, vol. 19, no. 3, pp. 56-64, 1987.
- [3] R. L. Massengale, "Implementing an effective internship program," *Journal of Computing Sciences in Colleges*, vol. 27, no. 5, pp. 24-31, 2012.
- [4] B. Nilson, Teaching at its Best, Jossey-Bass, 2010.
- [5] S. Writers, "25 Biggest Blunders in Wikipedia History," 2009. [Online]. Available: http://www.bestcollegesonline.com/blog/2009/02/10/25-biggest-blunders-in-wikipedia-history/. [Accessed 20 August 2014].