10/2/2021

Dear Dana Campbell,

After I posted my Draft essay in ComPAIR, I received 4 comments from my classmates.

1st comment said that my thesis statement was good, but it said that it can be better if separated the topics in different paragraph. However, I decided not to move forward with this suggestion because I think I have already separated my essay in 2 different topics properly as my 1st paragraph shows impact of Lovelace on computing history and programming; and my 2nd paragraph shows the impact of Lovelace on society and women in her era.

2nd comment also said that my essay was good and had strong arguments and it suggested to make my conclusion stronger. Therefore, keeping it in mind to make my conclusion stronger I added one more evidence stating Lovelace’s accomplishments.

3rd comment advice to make evidence 1 stronger. I was not sure exactly which evidence was supposed to be stronger, but I added evidence of Lovelace’s work in first paragraph by adding: “In fact, her work on Bernoulli’s number describing a repetitive cycle of operations which in the present time is known as loop algorithm and is common in many programming languages.” To make my argument stronger.

I also submitted my polished essay to writing center for more review and it really helped me to get my essay structure and grammar correct.

Overall, the comments really helped to build a good, polished essay. The comments gave me confidence that my essay structure and thesis were good, and I also helped me realise that I need to get more evidence and improve my conclusion so I will keep that in mind while writing my next draft. Moreover, I have learnt that I must appreciate peers’ draft and highlight the good things in their draft while reviewing next time and I will be more specific with my comments.

MANDATORY Originality Statement

I acknowledge that “the submission or presentation of the work of another as if it were one's own” is plagiarism, as defined by Dalhousie University. Committing plagiarism is a serious academic offense (<https://www.dal.ca/dept/university_secretariat/academic-integrity/plagiarism-cheating.html>).

I affirm that my submission represents my own thought and work and that the work of others is properly acknowledged.

Sincerely,

Mansi Patel

ID#: B00871094

The Superheroine of Computing History and Society

Mansi Patel

Faculty of Computer Science, Dalhousie University

ASSC1800: Society and Computing in History

Dr. Aaron S. Wright

10/2/2021

In general, a computer programmer is a person who deals with the software of the computer. A computer is of no use if does not have any kind of software. Software is like the heart and brain of the computer and, without it the computer would just be a metal box. A software program is something that gives instructions to the machine: how to complete the specific task given to it. Ada Lovelace was indeed one of the heroes for computer scientists as she not only provided the foundation of computer programming, but she also became a role model for women in CS society.

The major role that Lovelace played in programming history was that she provided ideas about how to implement science and mathematics by using machines and getting the required output from them. She was the one who provided information about how Charles Babbage’s Analytical Engine can be used to do mathematical operations in practical life due to which she became the first computer programmer (Haigh & Priestley, 2015). “Notes” written by Lovelace contained detailed information on how to calculate Bernoulli numbers by using the Analytical Engine (Haigh & Priestley, 2015). In fact, her work on Bernoulli’s number describing a repetitive cycle of operations which in the present time is known as loop algorithm and is common in many programming languages (Haigh & Priestley, 2015). She was also way ahead of her time: “Google’s N-gram tool, based on a massive full-text database of English language books, suggests that by the mid-1990s Lovelace’s fame had already outstripped those of computer-builders such as Presper Eckert and Howard Aiken” (Haigh & Priestley, 2015, p.8). In contrast to this, Haigh and Priestly believed that Lovelace was not a time traveller, she became so popular because she was well acquainted with modern concepts of mathematics and algebra which she used to create an innovative idea for the analytical engine (2015) but according to Steven Johnson, “her footnote opened up a conceptual space” eventually filled by “Google queries, electronic music, iTunes, hypertext, Pixar.” (2014). Haigh and Priestley also argue that the Babbage Analytical engine was never built-in real life and there is no evidence that the concepts of computer programming provided by Lovelace were ever used by the people who designed early computers (2015), but we cannot be so certain that Lovelace’s finding did not help anyone at all as, “she was already more famous than any Turing Award winner, having inspired at least a dozen biographers, a major computer language, several novels, a Google Doodle, a comic book series, and a movie” (Haigh and Priestley, p.2, 2015). In addition to that, people who designed early computers must have studied computing history and they must have gone through other scientists' work maybe they did not know Lovelace directly, but they would have seen her programs and got ideas for computer programming indirectly through other sources.

Ada Lovelace also proved to be a flag bearer of the success of women in computer society. Barr raises the issue of imbalanced gender proportion in the field of computer programming by stating that men getting a computer science degree is 5% more than women betting computer science degree (Barr, 2015). She writes that Lovelace is a role model for women who intend to make a career in computer science because, “Despite the historical differences, there is something very relatable about her for today's women” (Barr, p.2, 2015) and it is not hidden from anyone that even today women face gender inequality at their workplaces especially in fields like computer science and engineering. Adding more to this, Barr also highlights heroic traits of Lovelace; she argues that Lovelace, unlike men of that era, did not have the same access to education and was controlled by society but, despite those hardships, “she was in many ways able to ignore the script society wanted to write for her, or maybe she managed to just be somewhat unaware of it” (Barr, p.2, 2015).

In conclusion, Lovelace does prove to be a superhero for computer scientists as she excelled in giving the world one of its very first concepts of computer programming due which there is even a programming language named Ada. Moreover, she also played a major role in the lives of women who were underconfident or suppressed by society. The reason for this was that she herself overcame those barriers and became a substantial person in computing history as well as society.

**References**

Haigh, T., & Priestley, M. (2015). Innovators assemble. Communications of the ACM, 58(9), 20–27. <https://doi.org/10.1145/2804228>

Barr, V. (2015). Why is Ada Lovelace still the woman that young (and not so young) women look to? Retrieved from <https://cacm.acm.org/blogs/blog-cacm/195396-why-is-ada-lovelace-still-the-woman-that-young-and-not-so-young-women-look-to/>

Johnson, S. The Tech Innovators of the Victorian Age: What the Victorian Computing Pioneers Can Teach Us About Invention— and Time Travelling. Financial Times, (Oct. 17, 2014), showcasing material from his 2014 book How We Got to Now (Riverhead Books).