**Unit name:** Introduction to Business Programming

**Unit code:** ISYS2001

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**Reflection report:**

In this reflective report, I will identify and discuss what I perceive as the most impactful activity for a programming course. The introduction to business programming course taught us several fundamental concepts and skills required for software development. Throughout my learning journey, I have participated in various activities, but one particular activity stands out as the most impactful, providing valuable learning experiences and skills. This programming course helped us go into the details in relation to programming, highlighting the benefits it offered to us as students.

The most interesting activity I participated in, during this programming course was the class presentation about the different user interfaces. In this activity, we were divided into small teams and we were assigned a topic to prepare over a specified time limit and present it to the class. We were introduced to new challenges and skills throughout the course. We were given various opportunities to enhance our understanding of programming principles, design patterns, and best practices. By implementing several codes from start to finish, we were able to see how all the puzzle pieces fit together, which helped us reinforce our knowledge as well as prepared us for future projects.

This unit helped us have some real-world experience, development of soft skills, and enhanced our creativity and innovation. It not only strengthened our technical abilities but also prepared us for the challenges of working in software development fields. I hope to learn more about coding in the future as it is quite fun and interesting. The lecturer gave us challenges that helped us with broaden our learning experiences. After completing this course, we are more prepared for future challenges in the field of programming and software development.

**Appendix**

**Week 1:**

It was quite fun and interesting to work on the workshop activities. The lecturer taught us how to convert denary to binary and decimal to denary. The Code Magnets and Sharpen Pencil exercises helped us understand how a python code works and how the order of the steps is important for the code to work. We learned about variables and values, which are inclusive in python codes (e.g. How to assign a value to a variable, [user input: allows the user to input their choice of preference]). I was worried about this programming module at start, but after the first week, I seem to understand the lecture and workshop better than I thought I would. I am looking forward to the upcoming classes this semester.

**Week 2:**

I learned how to store a value to a variable and it can even be a list. We used the type function to show which of the seven datatypes we are using, for example, is it an integer, a float, a list, Boolean, a character, file or a string. The input function allows the user to enter information needed for the code to run properly. This week, we started coding using more than the print function and it was fun to learn (type function, matplotlib). Working on this week’s workshop question 3: “a\_taste\_of\_python.ipynb” was quite interesting as we learned how python codes work and how to start coding with the basics (Arithmetic operations, Relational operator). It also helped up find if there are errors in our code and we learned how to fix them. This week’s lecture was quite simple to understand and our lecturer made it fun to work with the basics of coding in python.

**Week 3:**

This week, we learned how to define a function and how to call the defined function in the workshop question ‘payslip.ipynb’. The lecturer advised us to try to code it first before we received the code without errors. I did have some difficulty making the code run without errors at the start as I was finding it difficult to call the defined function as well as with indentations. However, when I saw how to do it properly, it became easier to understand. I think I can define and call functions in python in the future without many issues now. We also worked on the workshop question ‘business\_buzzword\_generator.ipynb’. It was very interesting and fun to create three different lists of buzzwords, actions, and outcomes and connect them using the random function to make sentences. I am looking forward to the next workshops and lectures but mostly workshops so we can practice more coding.

**Week 4:**

In this week’s workshop, we started to code more on our own, for example in the Sale Price Worksheet and we were encouraged to code it on our own. I took reference to the previous workshops that we covered to correct all that was wrong in my code and finally it worked perfectly without any errors. It was satisfying to debug and make it work. I started to understand coding more and more which makes me like it even more. I am working on making my variables meaningful so that when other people see my code, they will understand it well. After receiving feedback from my lecturer, I realized I did not start my code in an orderly way and I understood the importance of using the proper steps in order to code. It is very easy to understand as the lecturer goes through every detail to make us understand the most out of the lectures and workshops. I appreciate it because this makes it easier for me to debug and make my code work. The workshop question Online Judge DMOJ was also very interesting to work on. I was a bit confused at the start but I made my own research and figured out how to code the solutions. It was fun to learn how to use the split function and count function. We also learned to convert a sentence into upper case. When I received satisfaction from my code working properly, it motivated me to code further. We were encouraged to make our code readable, which is why we use meaningful variables. I plan to make use of everything I learned in the workshops to write more codes in the future, especially in the upcoming workshops.

**Week 5:**

During this week’s workshop, we learned how to read from a text file. We were taught how to use the built-in ‘open()’ function to read the contents of a file in Python and we used the ‘with’ statement to ensure that the file is automatically closed after reading it, which is a best practice. We were first provided with an example on how to write or add new lines into the text file. It was interesting to add any sentences we wanted to the text file using the ‘input’ function. After that, we learned to create and import a module. It was a bit complicated for me, as it requires many steps such as saving the file with the extension ‘.py’ and then we had to upload it to google drive and many more steps. Even now, I am not certain if I remember everything well. I will definitely try it again by myself and see if it works. When it comes to the part where we import the module to our code, it becomes easier. We used it to perform calculations, which was fun. Overall, this week’s lecture and workshop were very informative and easy to follow. I feel confident that I now have a solid understanding of how to read the contents of a file in Python and can apply this knowledge in my own projects in the future.

**Week 6:**

In this week’s lecture, we learned about the importance of debugging and testing as well as the difference between the two. At first, it was a bit confusing but gradually, I have come to notice that all programmers make mistakes and have to go through the process of debugging and testing after writing their code. During the workshop, the worksheet “Debug\_isPrime()” helped me understand the process and importance of debugging and testing. It was interesting to try the ‘breakpoint()’ function and this makes it easier to debug our code. After debugging, and the code runs, it does not mean that the code is functioning accordingly because, through testing, we check whether the code is actually working fine (for example, there may be logical errors such as typing “>” instead of “<”). In the second worksheet “testing\_my\_math\_divide()”, we used a test table to test a divide function. It was fun and interesting to work on this question as we also tried to run the code with different data types to see what kind of errors we get and how to fix them. Overall, so far I find the classes interesting especially the workshops as I keep learning new things that I find interesting every week.