Assignment 5

Key Information (Front page)

How will I be assessed?

This assignment differs significantly in approach to those before it.

Assignment 5 is a self-reflection, guided by questions. There is no code to write. The rationale behind this mode of assessment is that reflection is a key element in learning, and that the most important skill you have learned in this unit is not *how to program*, but *how to learn to program*. In 10 years, very few of you will have a job that mostly consists in programming in Python.

This assignment is composed of a set of questions. Out of this set you need to select 10 questions, and only answer these. Each question is worth 1 mark. Submitting more than 10 answers will negatively impact your mark.

As with Assignment 1, you will be assessed individually, and there will be no interview.

Academic integrity

How will this be checked?

Your answers will be compared against every other students' work in the unit.

You should also assume that anything you are able to google can be easily found by the teaching team and compared against your work.

How can I avoid academic integrity issues?

- Never copy answers from anywhere. If you learn something useful online, rewrite it from scratch. It's also the best way to make sure you have understood it. If you're concerned you may cause an academic integrity case by copying something on the internet, the easiest way to avoid this is to not search anything too specific. Once you read a solution, it is very hard to forget it.
- If a fellow student asks you for a solution to a question, try instead to figure out what it is that they do not understand about the unit's content that prevents them from finding the solution themselves. Give a man a fish, and you feed him for a day. Teach a man to fish, and you feed him for a lifetime. Also, remember that giving your solution is just as much of an Academic Integrity breach as receiving it!
- You may find yourself in a situation where you feel like you physically cannot submit the assignment on time. Remember that you can submit an extension request (see Moodle AU or Moodle MA), and you can seek help (see Moodle AU or Moodle MA). If nothing works, remember that failures are part of the learning journey. And what is more important to you, an assignment mark or acting honourably?

Submission information

How many questions should I answer?

10 questions. If you answer more questions, you will be penalised. If you answer fewer questions, you will be marked out of fewer marks.

How do I submit my work?

Via ed. Make sure to submit all of your 10 quiz answers (and not more).

The latest time of submission of any question will be used as the time of the submission of the whole assignment, based on which we will compute late penalties, if any.

How to choose questions?

Choose questions you think are most interesting to you, and where you have something to write.

If a question does not apply to you (e.g. you have an extension for A4 and haven't submitted it yet), then do not select this question as part of the 10 you will answer.

If you're not sure, you can attempt more than 10 questions, and submit the 10 answers you think are your best.

How long should an answer be?

All answers have a character limit of 500, so that's a hard maximum. That's not very many characters, so you will most likely have to edit your answers multiple times to fit everything you have to write.

We don't enforce a minimum number of characters, but given what we have written just above, it is unlikely that you will get full marks for a question if you don't use most of the characters we allow.

I have submitted an answer for a question that I do not want to select (any longer). What should I do?

There are three steps:

1. Save your current answer somewhere else (e.g. a google doc) as you may change your mind later.
2. Replace your answer simply by the three characters `N/A` .
3. Submit that answer.

The answer box should then look like this:

N/A

497

Submitted

Note that if you do this there will still be a green tick next to that slide. You will not be penalised for that.

Failure to do follow the procedure above may result in more than 10 submitted answers, which would incur penalties.

Supporting information: Reflective writing

This assignment asks you to reflect on your work in this assignment and the unit overall. Reflective writing is something we **think** is easy to do but actually it takes a fair bit of work to do it well

How can I excel at this kind of writing?

Have a read through the university's LearnHQ page about reflective writing (in IT) and try to focus your efforts with this in mind. Following the Gibbs model would represent a very high standard however we do not expect that here.

What might this look like in FIT1045?

In our questions we are typically looking for you to follow an approach of:

- what? (tell us about the event of interest)
- so what? (why is this interesting / relevant?)
- now what? (what will you do / have you done differently based on this?)

Sample reflections:

Let's say you were asked to comment on how the assignments had

1. **Supported** your learning with loops,

2. **Confirmed** you were on the right track understanding loops.

Some examples for these are below

Example 1

When I was trying to make the restaurant simulator recook a meal I initially wrote the same code with running the same block – this was since I didn't quite get the "do...until" approach– Jiang (peer) helped me see what was common between the 3 blocks and how to move it from three if statements to a single (two part) loop condition. I won't make that mistake again.

✓ **WHAT** the student was writing repeated code for the recook a meal function.

⚠ **SO WHAT** they're implying that an understanding of loops requires more than just working with counters or "for _ in range" style -- this could be more explicit.

✗ **NOW WHAT** there isn't really an outcome from this. No clear way they are precisely changing their practices. Perhaps they could start with "when I notice myself repeating the same code, I will..." and share what their new approach will be.

Example 2

It was a testcase I got wrong in A1. I was trying to check a piece fit but kept getting a failed test. I tried stepping through the code line-by-line working by hand and it was checking each correctly but then I noticed I had accidentally set it to start from the wrong position.

This was helpful as it showed me my thinking was right about looping over the number positions but just I had just gotten mixed up about the power for the rightmost position.

Thinking about this more, I think I should step through my code on paper when I write it rather than doing it afterwards when something breaks as I think I lost a lot of time that way.

WHAT we don't exactly know what they were looking at, they should be more specific than 'check a piece fit'. Clearly they know what they mean but it's hard for someone reading this to know what happened.

SO WHAT they identify that they got to discover they were using iteration appropriately to go over the elements (a list? or perhaps digits in a number? could be more precise but sufficient).

NOW WHAT they've turned the comment about looping into something they want to keep doing (checking on paper) and have decided to change their process to do it earlier (it would also be fine if they said they'd keep doing it in this scenario).

1. Revisiting Assignment 2

Question *Submitted May 26th 2022 at 10:13:53 pm*

In A2 we asked you to restructure code components into functions. Describe how you think the code you wrote for that question or the process you used to write it could have been improved at the time. What would you do differently? Why? How would this influence your strategy in the future?

The code written for A2 were mostly hard-coded with a lot of if-else statements used as my teammates and I weren't familiar with for and while loops. The code length could've been cut but I wasn't familiar with while and for loops which I did brush up on after A2's submission. We were told to put the codes into functions but in my opinion, it's easier and more time efficient when code directly into the functions rather than what we were told to do which is what I did for next assignment.

2. Revisiting Assignment 3

Question *Submitted May 26th 2022 at 10:17:33 pm*

In A3 we asked you to restructure code components into classes. Describe how you think the code you wrote for that question or the process you used to write it could have been improved at the time. What would you do differently? Why? How would this influence your strategy in the future?

The code I've written for A3 was an improvement from A2 where more for loops were used so the code length was significantly shorter. I was lagging behind classes here for awhile so I had to catch up to class and do some extra research on coding classes and how it affects functions as a whole. The codes in A3 were not bad except one part where we had to hardcode so the code wasn't as straightforward as the rest which I would like to improve on so it can be understood without extra documentation.

3. Revisiting Assignment 4

Question *Submitted May 26th 2022 at 10:34:18 pm*

In A4 we gave you the possibility to use modules and create additional classes to the ones required. Describe one related design decision you made for your program for A4 that you think could have been improved at the time. What would you do differently? Why? How would this influence your strategy in the future?

A4 was just submitted not long ago and the decision I've made for my code is to make an additional function in Story class which its function is to split the story input from a list of strings containing multiple scenes to multiple lists where 1 list only contains strings on 1 particular scene which I still think now is the best decision I've made for A4. If I have more time, I could have shortened the code better which enhance its readability and understandability of other people reading it.

4. Extending a previous assignment

Question *Submitted May 26th 2022 at 10:38:21 pm*

Pick either an existing Python module (excluding random and math) or one concept studied later in the semester (e.g. recursion), and then describe how it can be used to add one interesting feature to the program you created for one of the assignments (A1 to A4). (By feature we mean something that extends the functionality of the program for the user.) For clarity, please summarise your choice by writing for example “A1+numpy” or “A3+recursion.” at the beginning of your answer.

A4+RegEx. RegEx could be used in A4 as seen from an Ed post but I didn't have courage to use it as it wasn't taught in lectures but I did read up about it after A4 submission. RegEx have a findall function that returns a list of all matches and I could use loop with findall function to get the index of ----, ==== and use them to split the strings given to scene and options. I can also use the search function to see if the scene id is in a list after splitting to do show_current_scene function.

5. Individual programming practices

Question *Submitted May 26th 2022 at 10:45:15 pm*

What is one non team-based useful programming practice you have learned while working on assignments A1 to A4? Pick something that was not explicitly taught in the unit. For example, the practice of documenting and picking meaningful variable names were taught during classes, so you can’t pick these. Describe the practice, how you discovered it, and how it will help you in the future.

Don't code anything extra that won't be used in the program whilst keeping the code simple and easy to understand by others. Coding anything extra that won't be used by the program just occupies more memory space so time taken during code compilation will take longer hence, less efficient. And extra codes will just make the code length longer and may confuse others when they're trying to understand the said code. I realized that in A2 when 1 of my teammates question the use of a block of code.

6. Programming as a team

Question *Submitted May 26th 2022 at 10:52:22 pm*

Pick one challenge, benefit, or drawback that you have encountered when programming as a team, describe it, and describe how you think it can be best managed, leveraged, or mitigated. Pick examples where you and your teammates were genuinely attempting to work well together.

One drawback is that we can't know which part is done coding as most of my teammates preferred coding by themselves in their own IDE and we can't keep track on each others progress unless it was announced. All the tasks are interconnected ad so without the previous part, one can't move forward. We managed it by making everyone announce their progress in the group chat. It can serve as encouragement to encourage high work efficiency while informing others on your current progress completion rate.

7. Team dos and don'ts

Question *Submitted May 26th 2022 at 10:58:09 pm*

What team-based dos and don’ts have you learned while working on assignments A2 to A4? Pick examples that are **not** specific to programming, and where you and your teammates were genuinely attempting to work well together. For example, students not doing any work or not responding would not count as a valid answer.

Learnt to be understanding on unexpected situations happening to groupmates like being forced to return to hometown by parents and how to respond to it. It happened during A3 where one teammate was suddenly forced to return hometown without advance notice by his parents and we as a team gave suggestions and ways he could contribute on the completion of the assignment far from home. He accepted our suggestions and followed them and gave a helping hand on the completion of the assignment.

8. Using a skill you've learned in this unit in a programming context

Question *Submitted May 26th 2022 at 11:02:50 pm*

Identify one skill you have learned in this unit and how you might use it in the future in a programming context. Provide details.

One skill I've learnt was how to code in Python as my first programming language. I can learn other programming languages like Java after Python. Java is more widely used and have a higher job demands although both Java and Python being almost equally popular. Transitioning from Python to Java may need time to get used to but it's doable as it is easier to learn other languages when one was already learnt. And with that, I can create many new, secured websites and apps for consumers to use.

9. Using a skill you've learned in this unit in a non-programming context

Question *Submitted May 26th 2022 at 10:28:37 pm*

Identify one skill you have learned in this unit and how you might use it in the future in a context unrelated to programming (e.g. with a different degree if double-degree). Provide details.

One skill I've learnt was to solve problems encountered in a unique and creative yet logical way. I've learnt to clarify and researched on the problems encountered and also relax my assumptions to generate new ideas based on past experiences on how to tackle the said problems. The ideas would then be evaluated and tested by actually trying each method to see if it works. It can be like to solve a financial problem when one is tight on money by starting on finding where all the money is spent.

10. Your area of strength

Question

Describe one important skill used in this unit where this unit has not challenged you sufficiently. Describe how you have or how you think you might set up your own challenges so that you can keep growing this skill on your own accord.

No response

11. Your area of development

Question *Submitted May 26th 2022 at 10:05:14 pm*

Describe one important skill used in this unit where you were exceedingly challenged. What have you done to improve it? What is your plan for future development - what do you think should be done in the future?

I was challenged by where I have to applied whatever I've learnt directly onto my coding assignments when I'm still not used to use them yet. I tried coding everyday and referred to multiple websites for learning purposes where I try different methods to complete a specific task, I've assigned to myself. I plan to continue do what I do since the beginning and to also reach out to my friends and teachers on the problems I'm stuck at and ask for guidance on the places I'm stuck at.

12. Learning how to program outside of Uni

Question

Describe one way you learned something important about programming that was not directly taught as part of the unit. What was the thing you learned and how did you learn it? How could you learn more this way? What would be, for you, other good ways to learn about programming that would expand upon or complement this way of learning?

No response

13. Job Posting

Find a real job posting (e.g. from seek.com.au or jobstreet.com.my) similar to what you would be interested in upon graduating. Provide a link and attach a pdf version of the posting (otherwise you get 0 for this question). What have you learned in this unit that will help you apply for such a position, directly or indirectly? Explain.

Answering this question requires you to fill in each of the 3 answer boxes below by following the accompanying instructions.

Question 1

Please paste below the link to the job posting and submit it.

Do not write anything else. Failure to do so will result in a 0 for this question.

No response

Question 2

Please download the job posting as a pdf and attach it to this answer box using the paper clip icon:

Submit just that.

Do not write anything else. Failure to do so will result in a 0 for this question.

No response

Question 3

What have you learned in this unit that will help you apply for such a position, directly or indirectly? Explain in the answer box below.

No response

Checking your submission

Once you are done, we recommend you go through each question and check that:

1. The answers you mean to provide are submitted.
2. Questions you do not want to answer have their answer box empty or only reading `N/A`.
3. Check that the number of answers you provided add up to 10.