MODULE REPORT

Module	CS1010 - PROGRAMMING METHODOLOGY
Academic Year/Sem	2021/2022 - Sem 1
Department	COMPUTER SCIENCE
Faculty	SCHOOL OF COMPUTING

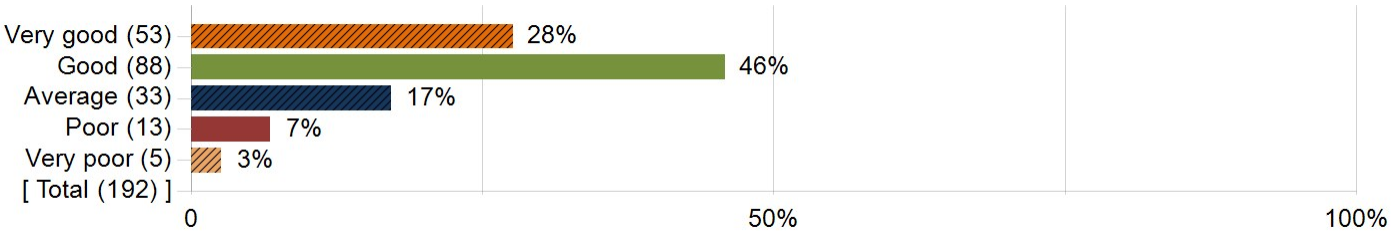
Note: Class Size = Invited; Response Size = Responded; Response Rate = Response Ratio

Raters	Student
Responded	192
Invited	244
Response Ratio	79%

1. Overall opinion of the module

Distribution of Responses

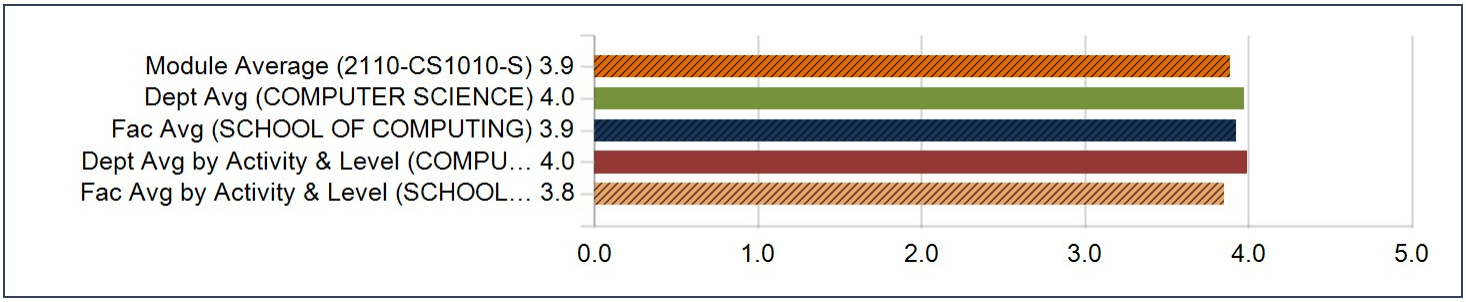
What is your overall opinion of the module?



Statistics	Value
Response Count	192
Mean	3.9
Standard Deviation	1.0

Rating Scores

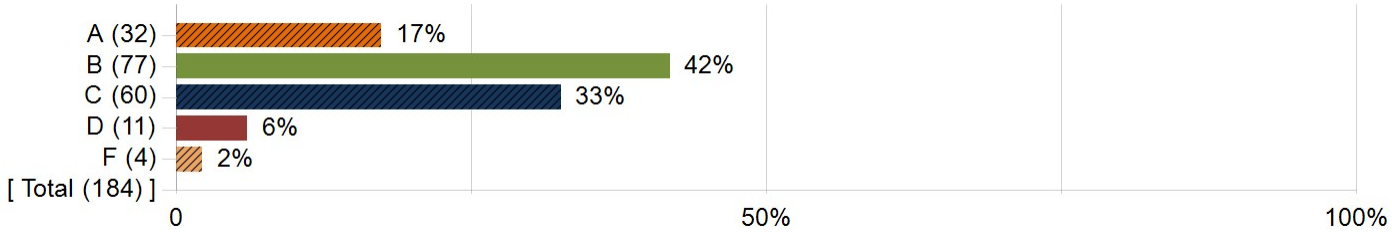
Question	Module Average (2110-CS1010-S)		Dept Avg (COMPUTER SCIENCE)		Fac Avg (SCHOOL OF COMPUTING)		Dept Avg by Activity & Level (COMPUTER SCIENCE-LECTURE (Level 1000))		Fac Avg by Activity & Level (SCHOOL OF COMPUTING-LECTURE (Level 1000))	
	Mean	Standard Deviation	Mean	Standard Deviation	Mean	Standard Deviation	Mean	Standard Deviation	Mean	Standard Deviation
What is your overall opinion of the module?	3.9	1.0	4.0	0.9	3.9	0.9	4.0	0.9	3.8	1.0



2. Expected Grade

Distribution of Responses

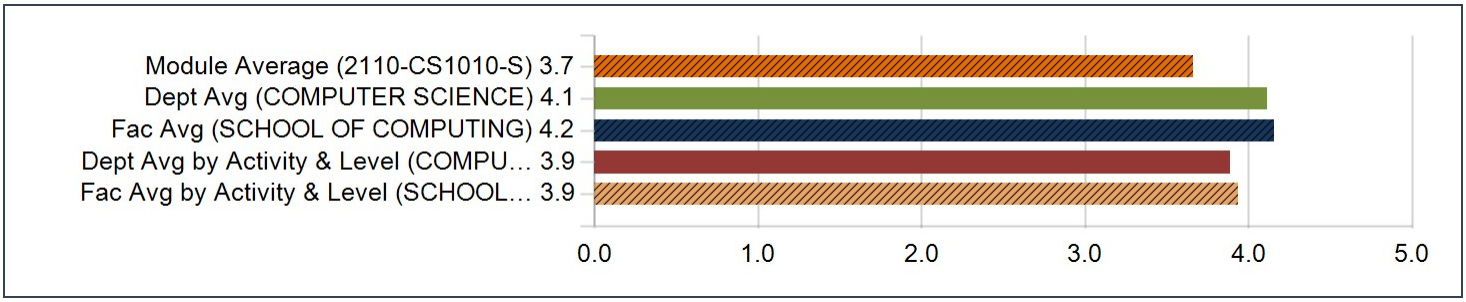
The grade that I am most likely to get in the module is:



Statistics	Value
Response Count	184
Mean	3.7
Standard Deviation	0.9

Rating Scores

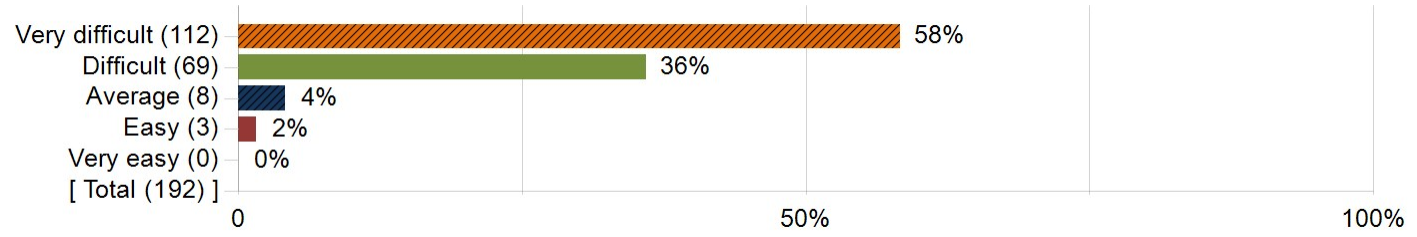
Question	Module Average (2110-CS1010-S)		Dept Avg (COMPUTER SCIENCE)		Fac Avg (SCHOOL OF COMPUTING)		Dept Avg by Activity & Level (COMPUTER SCIENCE-LECTURE (Level 1000))		Fac Avg by Activity & Level (SCHOOL OF COMPUTING-LECTURE (Level 1000))	
	Mean	Standard Deviation	Mean	Standard Deviation	Mean	Standard Deviation	Mean	Standard Deviation	Mean	Standard Deviation
The grade that I am most likely to get in the module is:	3.7	0.9	4.1	0.8	4.2	0.7	3.9	0.9	3.9	0.9



3. Difficulty Level of the module

Distribution of Responses

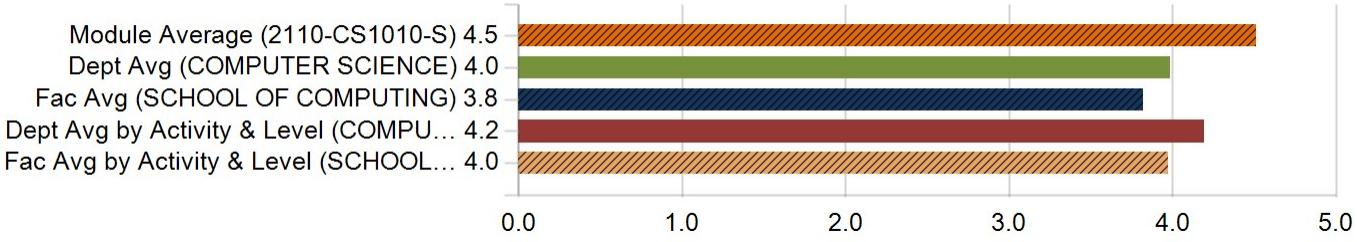
I rate this module as:



Statistics	Value
Response Count	192
Mean	4.5
Standard Deviation	0.7

Rating Scores

Question	Module Average (2110-CS1010-S)		Dept Avg (COMPUTER SCIENCE)		Fac Avg (SCHOOL OF COMPUTING)		Dept Avg by Activity & Level (COMPUTER SCIENCE-LECTURE (Level 1000))		Fac Avg by Activity & Level (SCHOOL OF COMPUTING-LECTURE (Level 1000))	
	Mean	Standard Deviation	Mean	Standard Deviation	Mean	Standard Deviation	Mean	Standard Deviation	Mean	Standard Deviation
I rate this module as:	4.5	0.7	4.0	0.8	3.8	0.8	4.2	0.8	4.0	0.9



MODULE LEARNING OUTCOMES

1. Understanding and applying the basic concepts of computational thinking.

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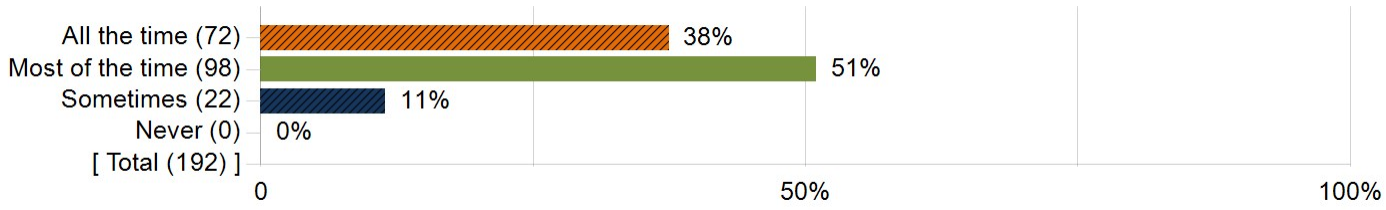
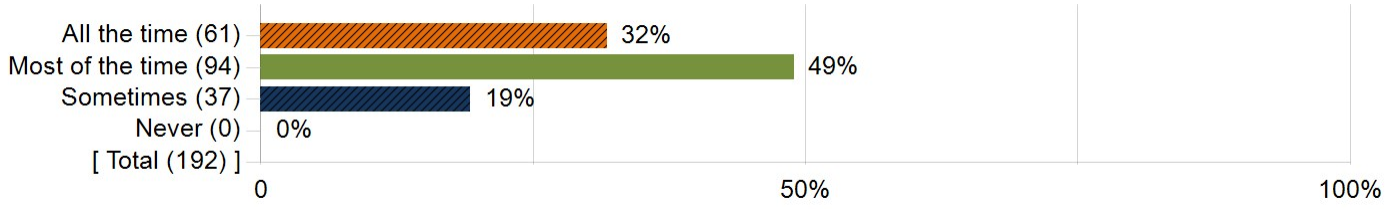


Statistics	Value
Response Count	192
Mean	3.3
Standard Deviation	0.7

2. Analyse the specifications of a given problem and come up with an algorithmic solution for the problem.

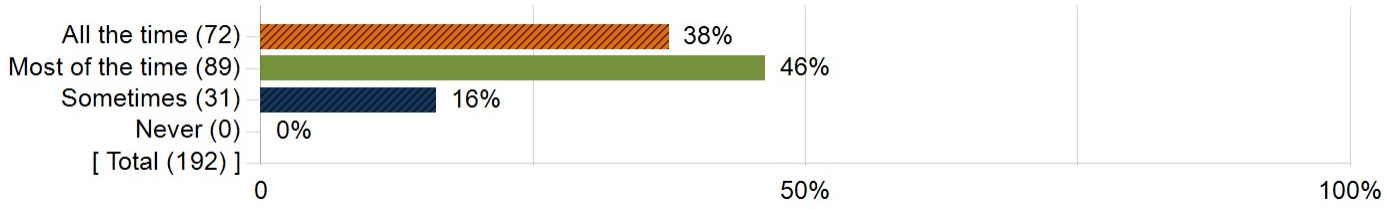
Analyse the specifications of a given problem and come up with an algorithmic solution for the problem.



Statistics	Value
Response Count	192
Mean	3.1
Standard Deviation	0.7

3. Use software tools to write, compile and execute programs.

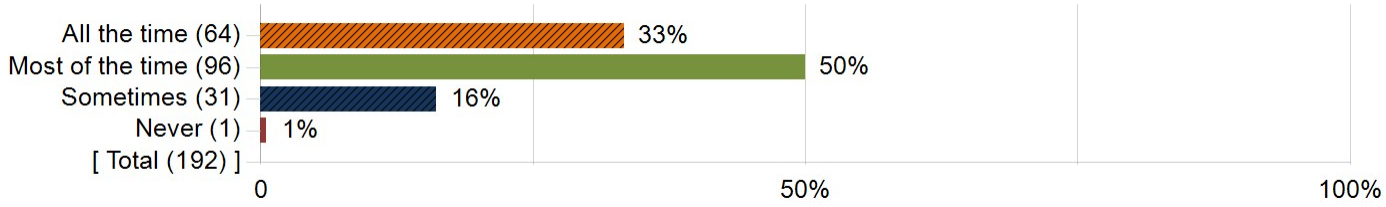
Use software tools to write, compile and execute programs.



Statistics	Value
Response Count	192
Mean	3.2
Standard Deviation	0.7

4. Trace programs and apply techniques of testing and debugging to verify the correctness of programs.

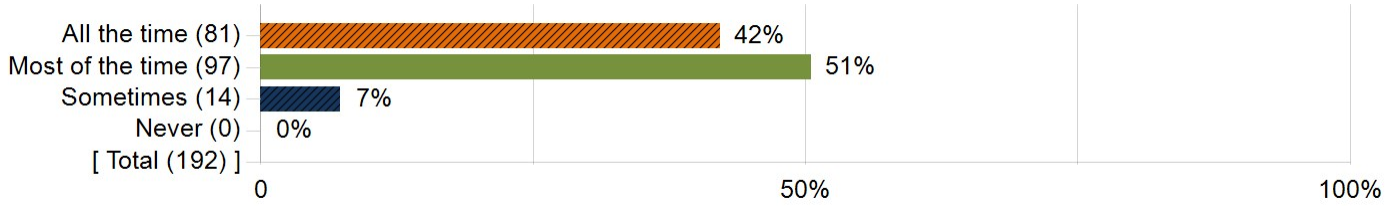
Trace programs and apply techniques of testing and debugging to verify the correctness of programs.



Statistics	Value
Response Count	192
Mean	3.2
Standard Deviation	0.7

5. Adopt good practices of programming style and program modularity.

Adopt good practices of programming style and program modularity.



Statistics	Value
Response Count	192
Mean	3.3
Standard Deviation	0.6

WHAT I LIKE / DISLIKE ABOUT THE MODULE

What I liked about the module:

Comments
It is somewhat interesting.
Learning about the different types and methods to code.
i appreciate the depth covered in the module
It builds the programming foundation into students that would require to do computing modules in the future.
very good teaching team with plenty of support available and well–thought–out flow of teaching.
It was tedious and challenging but fun and fufilling.
there were a lot of content being taught in just 1 module, which is beneficial in terms of new knowledge learnt but really bad for our grades :(
learning to solve different prooblems
Lots of hands on experience
learning the various concepts
Given quite a bit of practice to learn programming.
Exposes us to computational problems and trains our thinking
Sometimes coding is fun.
A great C crash course

Comments
covered a good foundation of C
Fun intro to programming
It teaches computational thinking instead of just teaching how to write the language. This makes it easier for us to transition to other languages as the rationale behind the code will remain the same
This mod is really challenging, and helpful as basis of programing.
The module helps to lay a strong foundation in C language.
challenging and interesting, there is a gradient and u will see much improvement in short amount of time.
Computational thinking.
Strong career fundamentals (technical skill, habit and mindset) incorparated into curriculum
The satisfaction from solving problems is what kept me going.
Gives us the knowledge and skills to be a decent coder in C language
I like problem solving. Therefore, I found the module interesting and trying to think of solutions to various problems was definitely something interesting. I liked the fact that I learnt an important and more difficult language, C and used a difficult text editor, vim.
I learned a lot in this short period of time.
I really like that I have learnt a lot from this module. 3 months ago I have no coding experience at all and I'm confident to say that though I'm still terrible at coding I have definitely picked up a lot of skills and computational thinking throughout this module
Learning a new programming language
Challenging, good module to learn computational thinking
Really introduces you into computing. very effective but information can be better digested with more time
It's definitely a difficult introductory course, but I think it has really encouraged me to keep on trying. I was afraid at the start since the prof doesn't provide answer keys, but I'm glad he doesn't as it really pushed me to try even harder to solve every assignment.
The module is very interesting and enhances our thinking
This module was really challenging (doing semi–ML code in an introduction to programming module is insanely difficult), but it's been a really great experience. The structure of the lessons allowed Prof to build up on concepts that were previously taught to us, as well as teaching us important concepts in programming, such as the ability to break down a big and complex problem into smaller parts, and how to think recursively using real–world problems (NQueens, Permutations and Tower of Hanoi). As compared to other introductory modules, the content taught was definitely a lot harder, but it will definitely help us in other modules
Assignment questions were quite addictive. Had good TAs that were glad to help and responded quickly
Concepts are taught in a good and logical manner. It doesn't jump around and slowly build up the foundation.
Introduced concepts like memory management and pointers which I had not seen before. The assignments were quite enjoyable to do. I enjoyed my lab classes quite a bit.
It is fun, and a lot of help is provided for those without prior programming knowledge.
Introduced me to a new discipline of thinking and seeing problems. Quite interesting
–
exposure to c programming
Learnt alot about c–language/programming.
Nothing
quite challenging, but very satisfying to solve questions
Interesting to learn about the basics of coding
it made me learn the hard and painful way
interesting and fun
nothing
Prof never fails to think of creative assignment problems that make you think really hard about the topics he taught that week, gets your thinking cap on which is rather useful in the future
introduces students to foundational programming concepts
Assignments are pretty fun
It is my first introduction to coding and many useful concepts and techniques are taught well.
Coding

Comments
It teaches me how to solve questions using coding methodology and teaches how to think creatively.
I like that we are encouraged to ask questions on Piazza. I like the assignments overall although the workload is very high and I can get stuck on it for hours. Seeing my test cases pass on a difficult assignment question probably feels better than taking drugs. On weeks where I am relatively free, I actually look forward to the release of assignments. I like the Prof too for the reasons mentioned before.
It really push me out of my comfort zone with programming. The weekly assignments are really interesting to do.
Pushed my abilities and prepares me well for future cs mods.
Computational thinking
the assignments are challenging
It expanded my mind. Many things that ive learnt i didnt know that we can solve problems in such a way
Fun and interesting topics. CS1010 I/O library was a great quality of life improvement.
NA
The knowledge learnt is interesting
It is fun learning something else I would not have learned in my major
This module is very comprehensive and I think I only really started learning about computational thinking when taking this module, even though I have tried a bit of programming in the past.
Clear learning, can tell that I clearly improved every week, every assignment. Coding is fun, solving questions and assignments feel like solving a puzzle and a logic problem combined.
I can get to learn programming and learn to solve computational problems step by step effectively.
This module is quite fun as there is a lot of thinking that has to be done to solve the problems. It helps enhance students thinking capability. It also feels good to complete an assignment.
Enhanced my critical thinking skills.
I like that this module exposes students to many different things such as unix, vim and github. I also like that the module does not provide an easy way out for students, but instead make the students think for themselves. Prof Ooi is great too.
I never took programming before but the weekly assignments were pretty fun once you figure out how to solve it.
Fruitful
Imparts crucial foundational knowledge on programmatic thinking.
I learnt a lot
If you do not really care about the grades, the assignment and exercises are actually quite cool and fun. Regardless, you will learn a lot from this module. I also noticed Prof made a few more exercises than previous years to help us better understand concepts with simpler exercises.
A relatively good course to introduce beginners to coding.
Provides good fundamentals to programming
Enjoyed the teaching style, assignments and overall learning experience created by Prof Ooi and his team
The programming aspect
introduce useful tools such as vim and Unix commands
Enables us to think a lot. made us learn coding and I got to know much features about vim. It helped us use our brain and gave us many approaches to solve a problem which I never thought about. Piazza is a great place to discuss and understand doubts.
The ability to balance between theoretical and practical skills
NIL
Very difficult. It was satisfying seeing your assignment code work as intended
I like that I am able to build up my computing foundation via this module so that when I take more advanced modules I will be able to understand the concepts thought more easily.
I can say that I truly learnt a lot in this module as I went from 0 programming knowledge to be able to comfortably write code and understand how the machine thinks.
Interesting questions posed during assignments and examinations
It is very challenging but necessary to build a good foundation for programming in the future. It challenges me weekly and forces me to think from different perspectives. This module also serves as a reminder to me that in university hard work doesnt always

Comments
translate to good grades but good grades are not everything.
The beginning of the module when we were learning the basics was interesting
manageable and fun process of learning up to mid–terms
Interactive and challenging
Learning about C
The module is challenging and informative. Looking back, I am appreciative of all the crucial fundamentals I have learnt from it.
As someone who came in with no coding experience, and yet still did above median while competing against people with computing diplomas/H2 Computing, this module built up my confidence a LOT.
The assignments really push me to think critically, breaking down the problems into computationally solvable ones
Computer science is inherently interesting, and thus solving computational problems and succeeding in them was satisfying. Learning and appreciating the algorithms put in place to improve the efficiency of our modern devices is something that was passively done. Thus, it was enjoyable to solve the problems ourselves and with many opportunities to do so.
interesting module to work on

What I did not like about the module:

Comments
The level of difficulty can be very high, resulting in a lot of hours spent trying to complete the assignment.
The workload was too heavy. I spent almost every day in a week doing at least 1 thing related to this module. I understand that we probably aren't suppose to even spend that long on assignments and whatnot, but as beginner students sometimes we are just stuck and we don't know why or how to ask anyone. It gives me a lot of stress as a graded assignment with a 5 day timeline is given almost right after learning new concepts. I find myself stressing about the assignments every weekend. The practical exams and midterms were also very tough. For a module that I spend the most time on, my grades were not reflective of the time I put into this module. It is demoralising — whether grades matter or not. It's just sad to see that after all that hard work and practice I'm still nothing compared to some of my classmates who have programming backgrounds. It's too complicated to learn a new concept then immediately have to apply it in a high level (for beginners) question. It's hard to come up with my own logic to answer assignment questions.
the pacing is very fast and sometimes leading concepts and applying them take way more than the 10 hours workload suggested. Sometimes it takes . The full course notes should be released ahead so that students can read ahead during down time and not be too cramped during crunch time during the sem.
The exams are very difficult.
tutorials seems quite redundant
the content were interesting but the amount of time required per week is out of the roof, im spending about 48 hours on assignments alone and more time is required to work on exercises, understanding new concepts and attempting the weekly quizzes
Too little time during PE
heavy workload
The focus of the entire module was on practical programming, but there's more weightage on midterms and finals than the PEs, which make no sense. Also, some of the concepts that were introduced weren't further elaborated upon, such as memoization and dfs/bfs. While that can be good to get students more interested in the subject, I've personally witnessed some students who gained misconceptions about such concepts (such as confusing memoization with pre–computation), and since they aren't touched upon, these misconceptions might be a detriment in later modules when the concepts are actually taught. I also think introducing recursive max that early confused many students more than helping them, perhaps it should have been introduced one lecture later. The difficulty gap between life.c and social.c was also too large, I think. Either social should have been made easier or life should have been made harder.
Too many assignments :/ maybe split it up into more modules
weekly assignments can get tiring
Tutorial time is a little too short, and assignments and exercises only being released on Thursdays, meaning that the assignment and practices basically has to be done through the weekend. Maybe exercises can be released after the lecture so we are given ample to try out questions related to the topics just learnt before the assignments are released.
Extremely difficult with little to no help from instructors for assignments.

Comments
Tough to translate understanding to actual code.
Very steep learning curve, very tough assignments, very stressful for those learning coding for the first time in their lives.
Lack of use of scanf and printf. Prof can let us use those 2 from the beginning and tell us the correct syntax to use. No need to go into details on why such errors should occur. why I feel this way is because now I have a very big dependency on cs1010 library, which I dont think is beneficial for my future modules
Assignments are done mainly over the weekend.
quite steep learning curve for a non–computing student
Three main points so far: 1) Glaring mistakes in midterm paper 2) Remarking of midterm papers change in marks 3) Incorrect mark allocation for PE1
Thought it is essential to have plenty of practice for programing, but the weekly assignment with such a low proportion to the overall grade made it a bit exhausting.
1) Glaring error in mid–term paper 2) Wrong test cases in PE1 3) Remarking of mid–term MCQ question due to wrong marking scheme 4) live debugging session during lectures
too hard and time consuming, i have other mods!
As a student with no computing background, this module took up a lot of time, especially my weekends.
Extremely tedious and time consuming
The workload is very heavy for a 4MC mod with weekly assignments and the difficulty of some assignments is too high for a beginner in C programming, which led to a lot of time being devoted to a single assignment.
Too much information to learn and felt that the pace was too fast as I had no prior programming experience.
Assignments can be overwhelming at times, and weekends are totally burnt because of them. Maybe reduce the difficulty of the assignments, or provide more hints/guidance, especially for the last few assignments.
This module is way too fast–paced and super beginner–unfriendly. Before I can even absorb what I have learnt, a new assignment or exercise is released. As a beginner, how are we expected to finish so much and learn at the same time? The workload of the module is just overwhelming. It is unfair to students that this module is a 4 MC module. The assignments simply take too much time for those who have no prior experience in the subject. After a point, it simply becomes a race for those who already know the subject. Even as someone interested in CS and problem solving, I could not enjoy the module due to the overwhelming workload, assignments, exercises etc. I had to sacrifice my time on other modules just to complete assignments. I would also like to bring up the last three exercises and 2 assignments, which were released in the span of 2 to 3 weeks. Many of us did the assignments due to the fact that they are graded and had little time to practise the exercises which are also IMPORTANT for our practice on problem solving as well as our thinking ability of algorithms. Furthermore, as the module is done on VPN, many–a–time, we have connection issues (at least for me) and I have to end up restarting vim or even the entire laptop itself. (I really thank the administrative team and the PE team for trying their best and am super grateful) this is simply a problem I faced when coding on the PE. Overall, this module is extremely beginner–unfriendly, way too fast–paced, unfair in terms of modular credits allocation and has a huge workload. I really hope that there will be modifications to it so that students can even get a chance to focus on what we learn. Nevertheless, I am glad I took this module as I definitely learnt a lot from it.
The learning curve is very steep especially for people like me who have no coding experience. The workload is also very large as compared to other 4MC mods, and is way more than the stated 10hour weekly workload.
NO TIME. Yes there is really no time to do other mod's work, all of my weekends were spent looking at my terminal and debugging code. You might suffer from PTSD after looking at your computer for the whole day for a couple of weeks straight.
The time spent on this module sometimes i can spend a few days on assignments
Not very beginner friendly, very steep learning curve. Learning how to use the PE is also a challenge. Assignments during the later parts of the course were very tough and time consuming to think, had to submit code that is incomplete/solve the question because I had no idea how to do it. Not very "solo–friendly", huge advantage if you have people to work with. (I know asking on piazza/TAs are an option, but sometimes having someone you know to discuss the question with is much better). No soft–copy notes during PE is a mild annoyance as everything is digital.

Comments
This module as complained by many previous years, is a very high workload module. it should not be a 4 MC mod but at least 6MCs More time should be given to digest the new content. the weekly assignments can be very overwhelming as it is similar to throwing us into the fire to burn before saving us after the assignment is over. Especially sometimes some the tutorial content does not cover / recap on the upcoming assignment topic due to backlog. Furthermore, the module's secrecy towards previous years examination paper answers etc. makes learning v difficult for example, not showing us answers towards 20/21 midterms would make it pointless to attempt it (apart from seeing if we can complete within the time) We would hence not know where we gone wrong that makes learning difficult. Overall this module is effective but torturous.
It's too hard
The difficulty of assignments sometimes jump from very difficult to very easy, and sometimes it was really demoralizing when I had to spend hours debugging, especially when I had other work to do. Maybe in the future, "harder" assignments could be released earlier so that we can at least read the think about the questions The difficulty of the first PE was also very demoralizing and it took a lot of effort to continue doing the assignment in the following week
Having to use vim and memorise commands for it even though it is a text editor that is not widely used in industries.
The way questions phrased in assignments/practical exams can be quite confusing. Sometimes it is not i dunno how to code, is i don't understand what the question want. The big(O) can be quite confusing.
A lot of theory was skipped in the class notes, with students expected to find answers from other sources. A lot of effort in this module(from both the teachers and the students) was spent to deal with the difficulty of C as a programming language, which I felt distracted from the goal of learning problem solving. I thus disagree with the idea if teaching C as an introduction to programming. The tutorials were quite disappointing.
The assignments can be quite difficult as compared to the tutorials and lectures.
Regrettable that the learning curve was extremely steep, and as a non cs student I did not have sufficient time to tackle the problem sets
A lot of weekly assignments that take most of my time. Honestly felt with the lectures(even thought I don't attend the live and watch the recorded at 2x speed), the tutorials and the assignments I spent more time on this mod that my other 4 combined.
pace is extremely fast and assignments take very very long to complete for those with no prior code experience. it is not a very friendly introductory module in my opinion.
It is very time–consuming, especially for students like me who have never learnt about programming before. If given more time, students would perform better as we can learn & understand better.
Everything
the workload is a lot..
Why use such an old language unlike the other classes using python
too time consuming for 4mcs, too difficult and not fitting as an introductory mod
the coding exams should take up a higher weightage
weekly assignments, unreasonably steep learning curve. Its a 1000MC mod
Could have been more explicit about the core aspects of computational thinking: abstraction, pattern recognition etc
Workload is way too heavy. As an introductory module to programming, I feel that is rather difficult. Although its been said that students without any programming background are able to pick up the course, it is still rather daunting. As a student with 0 programming experience, I felt really behind as compared to those who had years of experience in coding. Weekly lectures are still rather manageable but with some struggling on concepts such as pointers and arrays which newbies like me cannot grasp quick enough. Assignments are the real killer of the module (besides PE which is a given), they take of almost your entire weekend trying to solve the test cases and understanding the question requirements to be met. As lecture is on monday and lab on thursday with assignments, it feels like only Wednesday we are able to breathe as sometimes on Tuesday new problem sets are released. Assignments are so difficult that the lecture notes can only get you that far, for which the rest you have to crack your brain to understand it. I struggled through the entire module so my advice is to read up and have a few months of experience before this module so the topics are easier for you. Overall this mod was really a pain but just try your best.
Assignments at the back is really time consuming, especially when it coincides with all the other final projects for other modules.
Arrangement for the exams are a mess. As i opted to take exams physically, all the logistics were a mess in both PE 1 and PE 2. Venue issues were the main problem. For Mid–term, the venue I was provided had prior students using it that I had to personally

Comments
chase away. PE2 had issues where we were delayed for 30 minutes as no one could open the door to the meeting room.
very steep learning curve unforgiving assignments with tight deadlines
This module requires a lot of time and effort to finish the weekly assignments and to just keep up in general, and can feel very overwhelming at times.
The assignments.
The progression is fast after week 5–6
It is a hard topic to grasp and the exams are definitely challenging to beginners in code
It's not begginer friendly at all. Last assignment comes and it's year 3/year 4 related stuff? Not only that, the exercises and the assignments are not paced well at all. The exercises and assignments are released at the same time, with 3–4 days to complete, how is one supposed to complete both? Exercises are important to strengthen basics but assignments are graded. There's so much assignments overload and the difficulty is overwhelming. I've been burnt out from this one single module and have to think everyday about whether I can pass and the percentage I'm scraping through.
Sometimes the workload is a little high, but the work is generally quite enjoyable to do.
The weekly assignments for this mod are really time consuming and difficult for students with no programming experience. It will be better if this mod has a continuation, like a counterpart of CS2030 for other CS1010 variants, so to allow CS1010 to cover less topics but more deeply
Too much time commitment.
Learning curve is steep
the assignments are very rushed
i did not like that the assignements take very long to complete, but then again i understand and recognise that my coding skills have improved from this assignemnts
PE takes too long to return the script.
The content in this module is borderline insane. I can barely keep up, studying 3 days a week for this module. The exams are set at a difficulty where students are expected to fail which is good and bad at times as it can be demotivating for students. Also, since coding is very technical some of the minor details of the assignments and questions I noticed, I wanted to clarify but due to the sheer amount of content in this module, I was unable to as I will fell behind
The learning curve is very steep
Learning curve is a little too steep, especially for beginner programmers
I think that the workload for the module is a bit too much but I'm not sure how to go about changing this.
Seemingly overly demanding, difficult to get used to as a person with no coding background.
NA
workload was very heavy
Plenty of personal time is being consumed to do the assignments. Furthermore, the way this module is being taught feels too rushed. There were times when important topics like pointers are rushed through and not properly explained. The way questions are phrased can also be improved as there were times where I do not know what the question/ assignment is asking which waste a lot of time. Hints provided are also too general and does not really help much. I still believe that some prior knowledge of programming has to be known first as this module does not really teach people the basics of programming but rather teach concepts for computational thinking. I feel more can be done to explain concepts to students as I feel the explanation/notes can be lacking at times.
The workload of this module.
It takes too much time to complete the assignments.
Maybe a basic introduction to GDB TUI would be helpful for debugging.
I spend way too much time on this module, more than any other module. The weekly assignments are very very stressful for so little weightage. I feel this module is sometimes too suffocating for beginners as whatever we just learned is used so extensively in the assignments and practical exams. I know this module is supposed to make us better but it is a little harsh.
Unbalanced workload, takes up time from other modules significantly
EXTREMELY Difficult and time consuming. Sacrificed a significant amount of time for other modules for this mod
Every graded assignment I do, I feel my sanity slowly seeping away and I feel myself slowly going crazy with the insane workload this 4MCs mod is giving to me. The only thing letting me keep any semblance of sanity is the existence of waifus.
module workload exceeds expectations of a 4mc mod and assignments are very time consuming especially when I have no coding background

Comments
Workload is inherently high for those without programming background. Almost every weekend is spent doing assignments once lab starts. Also seems like one of those module where the effort put in will directly lead to better exam results/grades. However, it is still good to put in the effort so that you understand the concepts.
Assignment schedules and difficulty were overwhelming. For the measly amount of percentage scores they contribute to our final grade, the amount of effort and time needed to do them is disproportionate to the reward they offer.
Pace of the module is not consistent – Difficulty of concepts increase exponentially
N.A
The hours/days spent on weekly lab assignment. Assignments should be tough but there can be more guides/hints
assignments and exams are very difficult
heavy heavy workload – spent more time on this mod and its assignments than all my other mods combined this sem (is this really right?) alot of stress inferiority complex anxiety–inducing hardest mod by farrrr
The module is really tough as it requires a lot of logical reasoning. It demands a lot of workload :(. Also pls reduce the difficulty of the PE Questions. Just a suggestion as a student: Pls increase the timings of the tutorial class from 1 hr to 2 hrs and along with solving the problem set, pls also teach to debug, approaches to solve the problems and improve the logical understanding because that it main for midterms and also helpful in practicals. Also, the tutorial session is really short to discuss assumptions and doubts. Thanks
Too difficult for students with no programming background
Weekly assignments can be changed to bi–weekly
Nil.
I personally feel that the weekly assignments could get quite stressful and tiring for me.
Extremely high workload but I think that it is inevitable as this is the only way students would be able to complete this module in 3 months.
Time spent on this module was easily double other 4MC modules
Steep learning curve for total beginners.
The insane amount of workload – spending at least hours everyday on practice and not progressing or improving due to the difficulty of the questions is very mentally draining. The assignments were structured such that it is very difficult to complete alone and while we were encouraged to do it with friends, it was still very difficult if we are all beginners – some questions just felt as though they were made exclusively for those with coding backgrounds already.
– excessive workload – self–exploratory process definitely does not favour beginners – no structured/recommended direction nor simple resources for self–exploration, very difficult for beginners to pick up hard concepts – piazza does not really benefit beginners as we beginners dont even know how to express what we dont know about since we could not even pick up the content of the unit
Super challenging
Some topics were crammed in the middle of the semester
I do not mind content that is challenging, but it was rather stressful to have to prioritise this module over the rest for the bulk of the week for the entire semester.
steep learning curve that is detrimental to people who have no experience in coding
Never had the chance to use printf or scanf in action, quite concerned I might end up hitting a wall with it next sem. I also got deducted 3 marks from assignment for the same mistake(not checking for NULL after malloc) because its across 3 different questions and I'm still salty about it :(
I think more time could be allocated during labs for going through the exercises which we were expected to have attempted before that week's lab. The exercises provide good practice for us to apply concepts which we have learnt in our lectures, but without any feedback on our code it becomes difficult to know whether our approaches to the problem were appropriate, or if there were any improvements we

Comments
could have made in our solutions. I think the exercises lose a significant portion of its effectiveness if we were to just finish them without any input from our TAs.
Information dissemination in this module was atrocious. It should be alarming that crucial information such as corrections to the instructions of graded assignments, additional test cases, and possible penalties for writing in British English are posted on a Question and Answer (QnA) website and receiving only 80 views. Yet, the professor believes this is perfectly fine, and marks are deducted for those unfortunate enough to not scroll through the dozen of posts in the last day of their assignment which they have already finished. Answers are also posted on this website, and without being pinned, they simply end up in the mess of questions asked. The management is purposely refraining from using NUS's official website, LumiNUS, to disseminate information for some reason, in favour for their Github page and Piazza QnA website which are informal, unprofessional and unannounced media for communication. This is on top of the cryptic approach to teaching the module. Lectures cover the bare bones of programming which are already difficult for beginners. Yet assignments test us on concepts hardly apparent to the average programmer, and without any hints. Students are of course expected to find out the problems, find possible test cases to fail their current program, and reconfigure them to improve their robustness. However, the scope of the module is often overwhelming for a beginner, and help is offered only by asking, and asking the right questions is difficult if one does not want to embarrass oneself in an seemingly daunting environment where everyone feels like they know what they are doing. More help and assurance should be given to students as this cruel method of instilling inferiority is not essential to learning.
very hard for an introductory module
EXtremely high workload
2D array. The part on pointer to array of long type vs pointer to array part could be better explained. At the back part, mon lecture and wed tutorial is a bit rushed(?) at the start its okay since tutorial starts later. After PE1 everything just escalated so quickly (?) maybe the front part is too spread out? I don't know but it's very hard to trace a program with recursion (with the recursive leap of faith and all.....)