Academic Integrity in CS3300

As Computer Coding Classes Swell, So Does Cheating The issue of plagiarism in computer science classes is on the rise but this is not just an academic issue as it occurs in business. When I worked in business I worked with people that were sued for violating copyrights regarding programming code and have seen rulings on both sides. Recently, Supreme Court hears Oracle's claims that Google violated copyright law in using Java to create Android.

This issue of plagiarism in programming is complex. You have probably been given this information regarding Student Academic Ethics Code 2019 Student Rights and Responsibilities - University of Colorado Colorado Springs - Acalog ACMS shared with you.
This can be daunting and ambiguous so I want to clarify and help prevent what constitutes plagiarism in my programming class. I will use **Turnitin Plagiarism Review** feature in Canvas when uploading written assignments and coding assignments.

Collaboration versus Collusion and Use of Outside Code
The programming homework and projects are meant for individuals to complete for individual assessment. The assignment will include whether it must be an entirely original work by the student or if the student can incorporate pieces of code not created by the student that includes attribution. This course is focused on the software development life cycle so there will be opportunity to collaborate on the technologies and use of code from outside resources. If you do use outside resources make sure you give attribution and understand the code.

Examples to help understand the expectations
Here are some example situations to help you.[1] If you are in doubt, communicate with Deb.

USING CODE FRAGMENTS FROM TEXTBOOK/LECTURE NOTES/OTHER OFFICIAL COURSE RESOURCE
Joe also visits the office hours of the instructor/TA to get something sorted out in his code. The instructor/TA suggests some changes on the order in which he should iterate over his list. Can Joe use the improved code in his solution? – Yes! You may use any help that comes from the course staff and no need to reference them.

RECEIVING HELP FROM INSTRUCTOR/TA/Math Lab
Joe also visits the office hours of the instructor/TA to get something sorted out in his code. The instructor/TA suggests some changes on the order in which he should iterate over his list. Can Joe use the improved code in his solution? – Yes! You may use any help that comes from the course staff and no need to reference them.

USING EXACT PROBLEM SOLUTION
In his first homework assignment Nick has to write an original program PalindromeTest.java that takes a string as input and tests whether it is palindrome. He searches online for the term ”PalindromeTest.java” and finds that a student who took this course in a previous semester has uploaded her solution online. Can Nick download this file and submit it as his homework solution? – No! First of all, you should always credit the author of a work, in this case the student from the previous semester. Second, the assignment clearly asked to implement your own version. Searching for the exact term makes it a dishonest act, as you were clearly looking for a complete solution.

[1] BU Computer Science Academic Integrity
https://www.bu.edu/cs/undergraduate/undergraduate-life/academic-integrity/

LOOKING UP SYNTAX
Nick realizes that he cannot use someone else's solution and quickly closes the page. However, he is unsure how to handle strings in Java. Hence, he looks up the Java String reference page, where he finds out about syntax and built-in string operations. Is he allowed to use this information? – Yes! Syntax and built-in functions are part of a programming language. You are not expected to remember every detail about every function, feel free to look it up.

USING PACKAGE OR FUNCTION FROM OTHER RESOURCE
In CS350 students are introduced to scheduling theory – how should jobs be allocated to machines? Alex notices that for many tasks the best solution requires to first sort the jobs in some order, for example by increasing deadlines. In her homework she has to build an optimal scheduler that assigns jobs to machines while taking care of many issues, such as delay, faulty devices, permissions, etc. Can she use a pre-written sort function as part of her implementation? – Yes! The assignment is clearly meant to build her understanding of how the scheduler operates and not basic programming skills. Unless it is specifically stated, you may make use of software packages (such as built-in sort functions) or some code from other resources. However, you need to reference your source. For example, Alex may add a comment to her code that says//mergesort is part of the "sort" package from the personal website of
`John Doeat www.johndoe.edu/code.`

OBTAINING SOLUTIONS FROM STUDENTS IN PREVIOUS SEMESTER
John's friend Frank has taken the same course in a previous semester with the same instructor. The instructor has a habit of sharing her problem solutions with the students after the homework deadline has passed. She uploads it to a password protected site that only students in the course can access. Frank has downloaded all the solutions and offers to share them with John. Should John take it? – No! In fact, this would be theft since the solutions come from a restricted access source that John has no permission to access.

FINDING SOLUTIONS TO SIMILAR PROBLEM THAT INSPIRES YOUR SOLUTION
John finds some great practice opportunities online – such as www.geeksforgeeks.org. One of his homework problems reminds him of a problem that he has solved online. He incorporates the idea of that solution into his homework solution. Can he do that? – Yes! John found the solution to the homework problem by himself using his knowledge on the topic. In fact, it is great that he practiced on his own. In his solution it is a good idea to mention the other problem. He might write ”My solution follows a similar track of thought as the solution to problem X on website Y.” It is also possible that the practice problem can be directly incorporated as a subproblem into his solution. In this case he needs to cite the solution. ”If we reformulate the homework problem as blabla, then we can see that the first part of it is identical to problem X on website Y. I will use the solution to problem X as a subroutine in my solution.”

USING KNOWN ALGORITHM/METHOD
One of John's homework problems is a complicated graph-problem. The first step is to find the shortest paths in the graph. He knows that there are well-known algorithms to solve that. Can he use one of those or does he need to explain in detail how to go about it? – If the problem doesn't explicitly ask to develop your own shortest paths algorithm, yes you are allowed – and encouraged!- to use methods that are common knowledge or sometimes even best practice. In his solution he may write ”First, we find the shortest paths from nodes by using Dijkstra's algorithm.”

WORKING TOGETHER WITH OTHER STUDENTS
In many of your programming assignments you will be allowed to work together with other students. The instructors will always specify when you are supposed to work on your own. Maggie and Kathy

work together on their assignment for CS210. They sit in front of Maggie's computer and write the code together. Afterwards Maggie sends the file in an email to Kathy and they both submit it as their homework. Is this allowed? – No! You are allowed to discuss with your friends but you have to write your own code. In practice this means that you can brainstorm about how to attack the problem. You are allowed to draw the class structure of your software on the white board and debate what the best layout would be. But then each person has to work by herself to write the actual code.

WORKING TOGETHER

Jane, Jen and Joe have a study group and meet every week to work together on their homework in Crypto. They would work out the solution together and then agree on the language for writing it down, finally each of them submits this solution. Are they allowed to collaborate in this fashion? – No! And yes at the same time…. It is allowed to work out the solution to a problem as a group, unless stated otherwise. However, every person needs to write down the solution individually in her own words. Further, every group member has to clearly identify the others on their solution. For example, Jen would write at the beginning of her homework submission "I worked together with Jane X and Joe Y on the solutions to problems 2,3 and 5".

PERSONAL ISSUES

We want to share some thoughts on the best practice when you cannot meet a deadline and finish an assignment on time for some reason. The worst thing you can do is panic and copy the solution from some resource that you aren't allowed to use.

Case 1. You have planned out your time poorly, started your work late and are simply unable to finish your homework assignment by the deadline. – In this case the best thing you can do is to submit whatever partial solution you have and take the partial credit for it. If you do the math, one assignment will amount to maybe 2 − 5% of your final grade, it's really not worth the risk.

Case 2. You get a terrible stomach bug on the day before a major deadline. You try to do your best, but are simply too sick to work. – Contact your instructor, they are human beings too and understand that there simply are some very unfortunate situations outside of your influence. You can work out some solutions together. It may not be the best outcome you have hoped for but it is going to be fair given the situation. However, you have to be the active party reaching out to the professor and asking for accommodation. They cannot guess that something is going on. Also, you have to be very honest with yourself and the professor; were you really prohibited from meeting the deadline despite your best effort, or does your situation rather fall into Case 1?

Violation Processing Procedure

As a CS department we want to make sure we follow due process if we feel a code violation occurred. See CS STU 001 Academic Ethics Code Policy.pdf

If I have a reason to believe that a Code violation has occurred (due either to my own observation or due to a report by a third party), I will discuss the matter with the you,
provide you with the supporting documentation and ask you for a response.