Collaboration Policy

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1 Introduction

Our goal is to help you learn introductory material in computer science. Studies show that students perform better in the long-run when their introductory CS experience is collaborative. Hence, collaboration on all assignments *except exams and quizzes* is strongly encouraged in CS 18.

At the same time, we want to make sure that by the time you leave this course you have internalized the material yourself. Therefore, we have adopted a collaboration policy that generally encourages teamwork while establishing a few boundaries that help you make sure you understand everything you hand in.

This policy is specific to CS 18. Policies vary widely from course to course. If you have any questions about this policy, please raise them with the TAs or the professors. The consequences of violating this policy can be severe, in accordance with Brown's Academic Code policies.

`https://www.brown.edu/academics/college/degree/policies/academic-code`

2 Assignment-Specific Policies

Labs Pair-programming is required in labs. When programming in a pair, both of you should spend the same amount of time typing; switching off every fifteen minutes works well. Although only one person is at the keyboard at a time, both of you will be talking through the solution and making suggestions to each other, catching mistakes as small as typos and as significant as a misunderstanding of the problem specification. There are no restrictions on collaboration in labs.

Homeworks You are encouraged to discuss homework assignments with other students. You may even work out solutions together. However, you are not allowed to take away any written notes, diagrams, or code from joint work sessions. Emails, IM conversations, photos of whiteboards or notes and the like all constitute "notes."

We expect you to fully comprehend everything you hand in. To that end, *you must write up your solutions entirely on your own, and you must debug entirely on your own.* Your ability to independently implement solutions possibly developed with your classmates is proof that you understand them.

Projects You are required to pair program the projects. That means you will code the project together with a partner. Note that divide-and-conquer (you code this part, I'll code that part) is not pair programming and is not acceptable. See the Pair Programming handout for further clarification. Do not hand in any code that you and your partner do not both understand fully.

During project final grading, your grader/TA may ask specific questions about your design and implementation to each of you and your partner. Saying "I didn't write that part, so I don't know" is not an acceptable answer and will cost you points. So work in a way such that both partners understand the project implementation.

When discussing projects with students other than your partner, you should follow the take-away-no-notes-or-code-from-joint-work-sessions policy that applies to homeworks. Under no conditions should you share any of your code with anyone other than your assigned project partner(s).

Exams and Quizzes Exams and quizzes are the only assignments in the course on which every form of collaboration (including searching the Web!) is expressly forbidden. We repeat:

No collaboration whatsoever is allowed on exams or quizzes.

The exam should not come up in conversation, even just to mention how easy/hard/short/long you think it is. This may seem extreme, but even a comment as simple as "Problem 1 was pretty easy, don't you think?" can give a student an unfair advatange. A student who came up with a complicated solution for the problem might rethink his/her approach after hearing you say that.

You must sign each exam before handing it in to acknowledge that your solutions are entirely your own, that you did not discuss the content of the exam with anyone other than the course instructors, and that you did not consult any sources other than the course materials.

3 Online Materials

We are very lucky to live in an information age where people can share knowledge so easily, giving us so much knowledge at our fingertips. We want to encourage you to take advantage of the available knowledge pertinent to CS 17/18; but at the same time, our goal is to teach you to solve problems, and you cannot develop this skill if you consistently turn to others for their solutions.

3.1 The Web as a Resource

The CS 18 website includes links to all the course lectures and assignments, as well as various supplementary documents, some of which we have written (e.g., the CS 18 Scala IDE guide), and some of which we have not (e.g., the Java and Scala online documentation). You are free to access all materials linked to from the course website.

You are also allowed, with some restrictions, to search the web. Specifically, you can search the web to enhance your understanding of a language construct, a data structure, or an algorithm presented in class. More generally, you can search the web for answers to questions that are independent of any particular assignment.

However, you are not permitted to search the Web for any other information regarding CS 18 assignments. Furthermore, it is never in any way acceptable to copy or adapt solutions from an online source. For example, searching for a solution to a problem in language X, when you were asked for a solution in language Y, is indeed information regarding a CS 18 assignment, and cannot be consulted.

Here are some examples of search queries that abide by the CS 18 course collaboration policy:

- Declaring an array in Java
- What is a null-pointer exception?
- How to import library for HashMaps in Scala
- JLabel not showing up in Swing

Here are a few examples of search queries that do *not* abide by the course collaboration policy:

- Java hash table implementation
- Runtime of insert into a priority queue
- Linked list implementation in Scala
- Object-oriented design of heaps

If you're ever in doubt about whether a certain query is acceptable, you can always ask the TAs (or even ask them your question!).

In the event that you inadvertently stumble upon information relevant to a solution to a problem, and use this information to derive your solution, please cite your source. Most probably, you will not receive credit for your solution, but a citation will protect you from being charged with violating the course collaboration policy.

Please be advised: our staff is trained to recognize solutions that are not typical of CS 18 students. If we encounter one, we can easily do the same Web search as the student to uncover the source.

Finally, as already noted, all web searching is forbidden during exams or quizzes.

3.2 Piazza

We use Piazza to provide students with an additional avenue for discussion and asking questions. However, you must take extra care when using Piazza not to reveal, or even hint at, the solutions to any assignments.

What you can do on Piazza is ask or answer clarification questions about course materials, including assignments, so long as they do not pertain to solutions to any assignments. What you cannot do on Piazza is post anything that is at all revealing about a solution to even a small part of any of the course assignments where another student may see it. Solution-specific questions may be asked, but they must be asked privately.

We encourage you to post all questions and comments about assignment solutions privately—to the course instructors only. If you always post questions in this way, you will never run the risk of violating the course collaboration policy.

4 Protecting Your Workspace

If another student copies any of your work because you have neglected to set the appropriate file permissions, left your terminal session unlocked, or left loose printouts lying around, you will be held partly responsible. Therefore, it is important to make sure that the parts of your home directory where you keep your code are not readable by anyone else. You should also be sure to lock your terminal session when you are away from it, and keep careful track of all of your printouts.

Under the standard home-directory organization, which you will have set up in lab, all of your course-related work is in your `course` directory. To make it unreadable by anyone but you, open a terminal in the CS department and enter the following: `chmod 700 ~/course`.

To lock your screen in Gnome (the default Linux window manager), click on your name in the top right corner of your screen, and then select “Lock Screen” from the menu that pops up. Unlike logging out, locking your screen will save all open programs.

5 Policy Enforcement

The TA staff is trained to look for policy abuses and makes use of software designed to recognize similarities across programs. This software is run on all assignments and is remarkably good at detecting unanticipated use of shared code (i.e. plagiarism).

Because our course design is team-oriented, it is all the more important to understand (and remember!) what the boundaries are. Violating the collaboration policy is a violation of the Academic Code and can result in some or all of the punishments detailed by the university.

Once again, if you have any questions at all about this collaboration policy, ask for clarification! Misunderstanding the policy is not an acceptable excuse for not abiding by it.

Apparent Academic Code violations are referred to the Academic Code Committee for adjudication.

5.1 Regret Clause

Exceptions are *possible* only if you admit your violation to Professor Fisler (not a TA) within 24 hours after the assignment deadline. This gives you an option if you cheated in desperation the night an assignment was due, or allowed someone to cheat from you, or did something else and then felt guilty about it soon after.

Egregious violations may still be sent through the normal University process even if you admit to them under this clause, at the professors' discretion.

Please let us know if you find any mistakes, inconsistencies, or confusing language in this or any other CS18 document by filling out the anonymous feedback form: `http://cs.brown.edu/courses/cs018/feedback`.