

CS 15 Collaboration Policy Fall 2019

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1 Introduction

CS15 is intended to provide a rigorous (and fun!) introduction to the field of computer science, with emphasis on learning Object-Oriented programming using Java and 2D graphics. Unsurprisingly, each student must independently develop a thorough understanding of the material in order to succeed. The course staff evaluates this understanding through assessment of your written work. Grades in CS15 are entirely project and homework based – there are no exams or quizzes. Thus it is imperative that we be sure that your work, the sole basis of your grade, is entirely your own. This document details what is and what is not acceptable collaboration for CS15.

1.1 Motivation

This policy has been developed with over 50 years of experience teaching introductory computer science at Brown in mind. For CS15 specifically, the course staff believes that the most effective way of initially learning software design, implementation, and debugging is through working independently. Our teaching methodology encourages grappling with the material on your own first, then referring to the support of well-qualified TAs if you get stuck. This allows us to fully evaluate students without exams, and additionally means that all help received is correct, avoiding the possibility of inexperienced programmers confusing each other. Note that other CS classes in the department have different collaboration policies. We

certainly appreciate the value of pair- and team-programming for subsequent courses and as the standard working methodology in industry and research environments. While we do allow pair-programming for labs, the rest of the programming will be done independently; we believe you'll learn best by doing the bulk of the programming work on your own in this introductory course.

1.2 Enforcement

We strictly enforce this policy. Cheating has been a significant problem for the CS department in the past, but because of TA alertness and a software package called MOSS (Measures of Software Similarity), illegal collaboration is very easily detected in CS15. MOSS is run on hand-ins from the current year as well as hand-ins from previous years. This means that code from 2019 will be checked against code from 2018, 2017, etc. to ensure that students do not attempt to turn in hand-ins from previous years as their own work. Every year, a number of violations are caught and prosecuted with the university's Standing Academic Code Committee, nearly always resulting in convictions. A conviction typically results in a permanent directed No Credit notation on your transcript, parental notification for a first offense, and usually a semester suspension for a second offense (i.e., two or more programs in CS15). In addition, Brown is obligated to disclose the existence of a transgression when professional schools (Law, Medical, Business, etc.) request this information.

2 Discussion of Course Material

Importantly, you may absolutely discuss general CS15 concepts with anyone, including other current students. The following falls into this category:

- Going over CS15 lecture slides, our (non-assignment) handouts, Javadocs, etc.
- Questions that are on the mini-assignment, at a conceptual (no coding or pseudocode) level.
- Discussing object-oriented programming concepts, such as interfaces, inheritance, or polymorphism.
- General syntax questions. For example, "How do I declare an instance variable?"

3 Written Homework Assignments

You will complete one written homework assignments at the start of the semester, for which some code is written. These are turned in as PDFs using a handin script. Homeworks are to be done entirely independently. You are prohibited from talking about approaches to the problems or talking about the problems in any forms on the homework assignments.

4 Projects

4.1 Design

Collaboration on project design and mini-assignments, only, is allowed. You are allowed to discuss the design of classes that you will be using in your project, containment diagrams, and inheritance hierarchies, on a high-level. You may work in pairs or small groups to work on design problems and complete the mini-assignment. Collaboration beyond design is not allowed, and you must code all of your own projects individually (per section 4.2). In addition, you must include the cs logins of all of the students with whom you collaborated for the mini-assignments, containment diagrams, and inheritance hierarchies in your README before submitting your projects.

4.2 Implementation and Debugging

You may not discuss the implementation and debugging of code for projects with anyone except the course staff. You should not ever view or provide help with a project solution other than your own. You should not discuss, method breakdown, or pseudocode with anyone except the TAs. Letting anyone else view your assignments' code, even by accident, is strictly off limits. Whenever you are away from your computer, you should lock your screen or log out. If another student accesses your computer while you are away and uses your code, you are also guilty of violating the collaboration policy. This also applies for printing your code. When you print code, you should go get it immediately. If another student finds your printout and uses your code, you are both in violation of the collaboration policy. Keep track of your papers and dispose of printed out code when you are finished with it. Finally, allowing other students to see the files in your directory is not appropriate. Your file permissions are set by default to make your files visible only to you; do not change file permissions to allow others to access your course materials. **Also, do not post your code online in any public forum.**

5 Sections and Labs

Sections operate with “supervised collaboration” wherein they are fully collaborative, as TAs are present to ensure that all conversations, group work, discussion, etc. fall within the bounds of the collaboration policy. You are encouraged and expected to work with other students during discussion sections. You may discuss any takeaway notes provided by the TAs - these fall under the same category as lecture slides.

Labs are fully collaborative, and indeed collaboration is often required during your scheduled lab section. Labs are designed to be completed in the 90-minute period. However, it is perfectly natural that some students will want or need more than 90 minutes to complete the lab. If you do not complete the lab during the 90-minute period, you may choose to either meet with your lab partner to complete the lab on your own time, or complete the lab individually.

We have provided a script for you to use which will copy the portions of the lab you worked on collaboratively to your individual folder. You must use only the files copied to your individual folder to complete the lab, and you may only copy files using this script. You may not manually copy files from one student's folder to yours under any circumstances, including moving lab files. You may *only* work on the lab with the partner who you began the lab with. You may not discuss it with any other students. You may, of course, still be checked off and receive full credit for a lab for which you completed some pieces individually.

6 Conceptual Hours

At TA-guided Conceptual Hours, you may work on design problems and mini-assignments with other students. You may work without direct TA supervision; however, you are not permitted to write, look at, or debug project-specific code during Conceptual Hours and a TA will be there to enforce this policy.

7 Online Resources

You are encouraged to frequently reference the course website as you complete your assignments. Beyond lecture slides, the website has helpful documentation and supplemental handouts. Any material on or linked to from the course website is acceptable. The official Java resources, including the Javadocs and the Java tutorials hosted on Oracle's website, may be used as well. In addition, you are permitted to use a search engine to find how to fix specific errors or exceptions, but not broader conceptual solutions or implementations. For example, "NullPointerException" is an acceptable search query, but not "How to Code Tetris." You should never post questions regarding an assignment to an online forum. Note that it is easy for us to find solutions copied from some website or even a solution not directly copied but inspired by some online solution.

7.1 Piazza

CS15 uses Piazza, an online Question & Answer academic forum. You may use Piazza to ask general concept-oriented questions, clarifying questions for assignment specifications, or logistical questions. These questions must be feasibly answered online without close scrutiny at your code. If you are getting a specific error on a few lines of code, that's fine, but it is not acceptable to copy and paste in an entire method and ask what's going wrong. If you do post code, you must indicate what error you're getting and what you've tried. This policy is simply because it is nearly impossible for TAs to answer these sorts of questions through Piazza.

Please note that Piazza is meant to supplement TA hours, not replace them. Questions that require more detailed or complicated answers will be referred to TA hours. Important note: In order to abide by the collaboration policy, we ask that all questions be submitted privately. The TA staff will then publicize questions that we feel are appropriate for the general Piazza forum. Posts that will likely be made public after TA approval include:

- Clarification questions about project handouts
- Logistical questions
- Questions about lecture concepts
- Questions about specific, pesky JavaFX errors

Posts that are allowed on Piazza, but will stay private:

- Any questions specific to a project, but very narrow in scope.
- Questions about bugs where the solution would reveal project-specific information.

Posts that should not be posted on Piazza:

- Questions that require more than a few lines of code to ask
- Detailed project questions of a large scope (these will be referred to regular TA hours)
- Most debugging questions

7.2 Github, StackOverflow, CourseHero, etc.

You may never copy code or written homework solution from a forum such as Github, StackOverflow, or CourseHero. If you are ever in doubt, ask a Head TA. It is also against the collaboration policy ever to publicly post any CS15 material on any such site. If you post homework solutions or project implementations publicly, course staff reserves the right to ask you to take it down. For students wishing to show their CS15 project implementations to potential employers, we ask that you only make your code available upon request, and share it privately with the requestor, not publicly.

8 External Resources

In general, you should never discuss the implementation of CS15 assignments with anyone outside the class other than the official, current TA staff. This includes friends, roommates, students in other CS courses, past CS15 TAs, mentors, etc. If you believe you have reason to discuss CS15 assignments with anyone other than the current TA staff, you must first have it approved by the HTAs.

9 The “Wire Pull” Test

Andy reserves the right to, at any time, ask you to submit to a “wire pull” test. The term comes from electrical engineering, where in collaborative projects, students may be asked to explain the effect of pulling any given wire. In our domain, it means we may ask you to explain any line of code or program-architectural decision. In other words, we can ask you to meet and explain any part of your project code (or other written work) that we deem suspicious or confusing. Thus, you should be able to comfortably explain why you (and you alone) wrote any single line of code.

10 Summary

To sum up our policy, no collaboration of any form is allowed on programming or written homework assignments (whether work on implementation, or debugging), except for during design discussions, conceptual hours, and non-coding questions on mini-assignments. Labs are fully collaborative during your lab section and only with your single partner afterwards. You may not look at solutions online or search for assignment implementations. If you fall behind in the course, it would be far better to end up getting an NC for one project or even for the course, with the chance to redo it without any consequences, than to cheat and copy someone else's work, which would almost certainly result in being caught and punished, with a permanent record.

11 Regret Policy

We understand that, in times of significant stress, it is possible that a student may yield to temptation and deliberately violate the collaboration policy in an attempt to finish a project or homework. If you violate the collaboration policy but bring it to the attention of the HTAs within 72 hours of the submission of the project which occasioned the violation, **you will only face internal course sanctions** (including but not limited to NCing the assignment) and CS15 will not refer your case to Brown's Standing Committee on the Academic Code. Please note that this is a **one time** option. Repeatedly violating the collaboration policy can and will result in your case being brought to the Standing Committee on the Academic Code as a repeat case, which, if you are found guilty, will result in a significantly harsher penalty than a first offense. We sincerely hope that you never have to use the Regret Policy.

12 Conclusion

Any other form of collaboration not detailed in this policy is prohibited, unless first cleared by an HTA. The consequences of breaking this collaboration policy are severe. If you are ever in doubt about whether something is acceptable, please reach out to the TAs before you put yourself in a regrettable position. We believe that this policy is explicit enough to guide your judgment with very little gray area. When we confront a student with a case of suspected violation, an answer of "I didn't know that this was wrong" will not find sympathy. Follow the policies outlined here and you will never have to worry about the unpleasant consequences. Take pride in fully developing your individual capabilities in this class. Remember, the TA staff is here for the sole purpose of helping you succeed in CS15. You are encouraged to discuss any questions or concerns about the course (or computer science in general!) with the TAs. Note that the purpose of this policy is to prevent the type of collaboration on written assignments that would violate Brown's Academic Code as it applies to CS15. Our intention absolutely is not to discount the camaraderie and fun that CS15 is known for. You're encouraged to talk to your classmates and friends about your experiences in the course,

ranging from how you like this week's lecture material to how great the last skit was. We hope you find CS15 and the entire computer science department to be both welcoming and helpful.