Ethics in Computer Science

Case Studies\*

*TJHSST Honor Code: I will uphold academic and personal integrity in the TJ community.*

**Case 1 - Sisterly Love**

Sheryl was in her bedroom one Saturday afternoon and was struggling with knowing how to start a particular assignment. She stared at the lab instructions for what seemed like the better part of an hour, but had nothing to show for her efforts. Since her older sister Marissa took the course a couple of years before, she went down the hall to ask her for help. After spending about 30 minutes with Marissa, she came back to her room and began coding. An hour later, she was confident in her solution and submitted her work.

*Give an example of what may have transpired between her and her sister that would be considered unethical collaboration.*

*Give an example of what they could have done that would have been considered ethical collaboration.*

**Case 2 – Lost Steam**

Frances is a senior in Data Structures. It isn’t her favorite class, but she worked hard during the first semester. For 2nd semester, she decided that she would only focus on what she was interested in. In Data Structures, she spent most of her time looking at websites. Her teacher knew that Frances never did any work in class. When Frances submitted all the labs for the unit at once, the teacher was suspicious and easily discovered that Frances had received the labs from her friend Meg, who had taken Data Structures in 10th grade. The teacher then realized that Ginni had also received one of the labs in that unit from Meg.

*What would be appropriate consequences for Frances, Meg, and Ginni?*

**Case 3 – But I Didn’t Mean To**

James was having trouble with a lab, so he asked Guido for help.  They were at their own houses, so they discussed the lab using their favorite chat client.  However, ultimately they found this more frustrating than helpful, so Guido emailed James his work on the lab.  James looked at Guido’s code, figured out his problem, and then wrote the lab himself.  When the teacher asked James why the lab he submitted had Guido’s name at the top, James explained the situation and said he must have submitted the lab Guido sent him by mistake, rather than the lab he wrote up himself.  James then submitted the lab he wrote himself.  MOSS indicated that the initial lab James submitted was a 98% match with Guido’s lab, but the second lab James submitted did not show evidence of plagiarism.

*Who in the above scenario violated TJ’s Honor Code? Why?*

**Case 4 – I Didn’t Think Everyone Could See That!**

On a Sunday evening, Jack was stumped on a lab, so he reached out to his buddy Mark for help. It was clear to Mark that Jack understood the problem and had a good idea for a solution. However, Jack had some syntax error messages that were unfamiliar to the both of them. Mark needed to see Jack’s error messages, so he asked Jack to put his code on Pastebin – a website where programmers can post code online for others to see. Jack did so and then sent Mark the link to his code. When they were both looking at the code together, Mark was able to find what was causing Jack’s error. He pointed out the error and let Jack figure out how to change his code so that it no longer produced errors. Unbeknownst to both Jack and Mark, Linus needed help with his assignment and searched the Internet for help. Linus found a [mostly] working solution on Pastebin and used it to finish his assignment.

*Who in the above scenario violated TJ’s Honor Code? Why?*

**Case 5 – Win, Lose, or Draw**

Alan was staring off into space in the lab while he was supposed to be working on an assignment. He understood what the instructions wanted him to do and knew he could code it if he could just figure out the “trick” to the problem. His friend Grace from the other side of the room seemed to be finished, so he asked her for some help. Grace said, “Sure, I’ll help, but let’s go to the board.” At the whiteboard, Grace drew a diagram partly representing the problem and asked Alan to give her as much information about the problem as he could. As Grace was diagramming (no code was being written on the board), Alan’s light bulb turned on so he thanked Grace and headed back to his computer to knock out the solution.

*Did any unethical collaboration occur? Explain.*

**Case 6 – Got Mail?**

Bill noticed that his friend Steve always finishes his labs during class and almost never had to work on them at home. At lunch one day, Bill asked Steve how he managed to finish his labs so fast and was hoping to hear about some great study method Steve employed to learn the material. Bill was shocked when Steve told him that there is an email account that contains all of the solutions to the labs. Steve then gave Bill the username and password to the account. Bill became angry when he thought about his needless worrying about being one of the last to finish since some of the students were probably accessing this anonymous shared account. On the bus ride home that afternoon, Bill shared all of this with his other good friend Larry who isn’t taking the course. Larry convinced Bill that this is a victimless crime and he should use the solutions to give him a boost when needed. Over the next few months, Bill used the labs for support whenever he got stuck on an assignment.

*Who in the above scenario violated TJ’s Honor Code? Why?*

**Case 7 – The Little Engine That Could**

George enjoyed Foundations of Computer Science, even though he realized the subject did not come as naturally to him as it did to some of his classmates. He didn’t usually do very well on tests, and he got a lot of help from his friends and teachers on his labs. Still, since he thought computer science was interesting, he decided to take Data Structures. In Data Structures, the tests were harder and the labs were longer and more complex than they had been before. And although George still liked computer science, he did poorly on tests and had trouble coding solutions to the labs on his own. He started to get very worried about his grade in the class.

*Give one example each of:*

* *an ethical way George can try to succeed in Data Structures*
* *an unethical way George can try to succeed in Data Structures*

**Case 8 – The Best of Intentions**

Ada was off to compete in the National Science Bowl. As a conscientious student, she brought her laptop with her and finished her Data Structures lab. She had some trouble accessing GradeIt, so the emailed her GradeIt username, password, and lab to Charles and asked him to submit it for her. Charles was having trouble getting the second half of this lab to work, so he looked at Ada’s code and copied part of her code into his lab. He then submitted both labs.

*Who in the above scenario violated TJ’s Honor Code? Why? What other courses of action could Ada and Charles have taken?*

**Case 9 – Where is that Log Out Button?**

Howard and Sean were eating lunch together. The topic of grades and deadlines in Data Structures came up so Howard asked Sean to let him use his laptop so that he could check his grades and submit a lab that was due shortly. Howard logged in to Grade-It on Sean’s computer and submitted a lab. The next day, Sean submitted a lab to Grade-It, but failed to notice that he submitted his lab under his friend Howard’s account since Howard never logged out of Grade-It. This action caused Sean’s work to show up in Howard’s account. A couple of days later, Sean logged in again (this time correctly) and noticed that his work didn’t appear to be there so he submitted again. The result is that both Howard and Sean seem to have the same exact code for this particular assignment with each version listing Sean’s name as the author. Howard’s work was nowhere to be found and MOSS report a 100% match.

*Did anything unethical happen here? Is this a case of plagiarism?*

*Provide solutions that could have prevented these events*

*What would be the appropriate consequences (if any) for Sean and Howard?*