

# CS270: LAB #20

## Constructing final exam question

You may work in teams of ideally three people (two/four is acceptable in the event of an unscheduled absence). Unlike most labs **this lab is due to be submitted into Gradescope at the end of the class period (a 10 minute leeway is permitted to allow for upload time etc)**. In order to receive credit, follow these instructions:

[a] Every team member should be discussing simultaneously the same problem – do NOT try to divvy up the labor and assign different problems to different students since the material is cumulative.

[b] Directly edit this lab PDF with your answers (extra pages can be added in the rare event you need more than the allotted space)

[c] Each lab, rotate which member has the responsibility of being the Scribe. This is the person that is typing the answers and uploading the final PDF – note that only a single copy of the filled in PDF is turned into Gradescope. Only one lab needs to be submitted for the entire team, and all members receive the same score. Make sure to use a font that your PDF editor is compatible with (otherwise you might find your answers appear as weird shapes/sizes or simply disappear entirely!)

[d] The Gradescope submission must have each answer properly tagged with the appropriate question. Moreover, every member of the team must be listed as a submitter. Although it is the Scribe which executes these actions, it is still the responsibility of the entire team to make certain this is done properly (thus it is highly recommended that the Scribe share their screen so the entire team can witness it). Answers which are improperly tagged cannot be seen by the grader and thus cannot be scored.

### **REMOTE ONLY:**

[e] Each lab, rotate which member has the responsibility of being the Recorder. This is the person who hits the Zoom Record button (once the technical permission is granted by the TA/RCF/Professor) and ensures that everyone has their camera/microphone on. They are also the member that is responsible to make sure the DrexelStream video is marked as viewable and entered into the <https://tinyurl.com/VidLinkForm> webform before 11:59pm (they should also email the rest of their team as confirmation.) Note that the video file doesn't get created/processed until after the Recorder has quit Zoom.

[f] Each lab, rotate which member has the responsibility of being the Manager. This is the person that ensures that everyone is participating equally and honestly, keeps the group on task, ensures that all team members understand a solution before going on to the next question, and presses the “hand up” button in Zoom to summon a TA or the professor (but they only do so after surveying the group to make sure everyone has the same question).

Team Name (CS pioneer): Marvin Minsky

Scribe name: Evelyn Thai

Recorder name: Terie Ha

Manager name: Lixiao Yang

Other team member (if any): Jerry Li

#0 [0 pts] Before proceeding further into the lab, have each member take a few minutes to *anonymously* complete the “post course survey” in bbLearn. If we get 75+% participation on this, then every student in the class will receive a bonus point on their final exam. Also, please have already done the four optional questions worth bonus pts on the final.

#1 [10 pts] As a group, collectively decide on a concept that you feel is important in the course but that you found difficult at first (or perhaps still do) and list that concept here:

The NAT, DIMACS

#2 [15 pts] Why do you feel this concept was so challenging? Is there something that could have been done differently in the class to have made it more accessible?

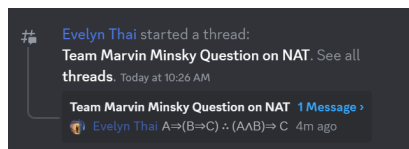
It was challenging because it is hard to come to the solution when you don't have any clear directions. We can make it more successable, we need more lecture example.

#3 [30 pts] Invent a problem on this topic that you believe would make a fair question to ask on a final exam. It should not simply be a copy of a questions already asked.

$$A \Rightarrow (B \Rightarrow C) \therefore (A \wedge B) \Rightarrow C$$

#4 [5 pts] Have one of your team members create a thread in the #reviewing Discord channel titled using the template: "Team [CS Pioneer] question on [topic]:... "

Paste a screenshot from Discord of the post below: (Note: do not post the solution yet)



#5 [30 pts] Solve your proposed question:

Line #	Expression	Rule
1	$A \rightarrow (B \rightarrow C)$	Premise
2.1	$A \wedge B$	Assumption
2.2	$A$	$\wedge E$ 2.1
2.3	$B \rightarrow C$	$\rightarrow E$ 1, 2.2
2.4	$B$	$\wedge E$ 2.1
2.5	$C$	$\rightarrow E$ 2.3, 2.4
3	$(A \wedge B) \rightarrow C$	$\rightarrow I$ 2

Check Proof Save

Number of Steps: 7

Great job! Don't forget to save your work by clicking "Save"! This will allow you to view this correct proof later!

Result: The proof is valid and complete!

#6 [1 pt each part] (A) What is a feature/topic in cs270 that you would definitely keep:

We think we should keep the Equational Reasoning

(B) What is a feature/topic in cs270 that you would want to see changed (how?) /dropped (why?):

We think we need to change the Lecture Recording for NAT by making more examples

(C) What is a feature/topic in cs270 that you would want to see added and why:

We think we should have more opportunities for the correction, and more office hours.

#7 [7 pts] Write a short (1 paragraph) letter to 270 students of next quarter. What advice can you give them to help them succeed? What do wish that someone had told you about this course before you took it? [it is okay if different teammates provide conflicting suggestions -- all points of view matter!]

You may do it on the next blank page, if you wish

You should start doing HW early, do not wait until the last minute, take advantage of office hours, watch the lecture records carefully and remember to take notes.  
You should ask when you need help because the course moves quickly and it is easy to fall behind.