

**SI SESSION PLAN**

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| SI Leader: | Alex Iacob | Session Date: | 9/11/22 |
| Week #: | 4 | Session Letter: | A |
| Course & Section: | CSCI 141 Section 7 | Course Instructor: | Steele |
| Planning Date: | 9/11/22 | Planning Time: | 12:40 - 1 |

**Beginning reminders:**

1. Is the room set up in a way conducive to collaborative learning?
2. Is the agenda posted to the board for participants to see?
3. Do you have your attendance sheet up to record your attendance?
4. Do you have any other documents/resources up and ready to go for your session?

If you are all set with the reminders, then go have fun and good luck!

**Main concepts student should feel more comfortable with:**

* Recursion (probably not, but that’s why they come to sessions)
* Execution diagrams
* Call stack
* Substitution trace

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| **Topics to cover** | **Process to use\*:** | **Time** |
| **Opener:** Announcements and birds | Birds is a good game and some announcements.   * Bowtie lab due this Tuesday (9/13) * HW due this Friday (9/16) * Next week’s topic is going to be about iteration, recursion’s cooler older sibling | 3-5 |
| Brain dump with the main concepts | Split them up in groups depending on the amount of students and have them work together for a few minutes then share  Main things to note,   * **Recursion** * Base case – the thing that stops the recursion * Recursive case – the thing that continues the recursion * **Execution diagrams** * There are a lot of boxes * Represents method invocation * Must show parameters for the method * **Call stack** * More boxes * No need to show method parameters * **Substitution trace** * Mainly used for math * Sometimes showed as a tree | 10-15 |
| Recursive rectangles | This was last year’s recursion lab, and they already did their recursive lab, so this is fine, this is what it should look like    Every rectangle has two smaller(half the size of the original) rectangles. Depending on the number of students, they can be split up and start working on it together OR we can work on the board together. | 20 - 30 |
| Execution Diagram for the recursive rectangles | Exec diagram using parameters (100, 3)  rectangles (100, 3)  single\_rectangle(100)  rectangles(50, 2)  single\_rectangle(50)  rectangles(25, 1)  single\_rectangle(25)  rectangles(12.5, 0)  rectangles(12.5, 0)  rectangles(25, 1)  single\_rectangle(25)  rectangles(12.5, 0)  rectangles(12.5, 0)  rectangles(50, 2)  single\_rectangle(50)  rectangles(25, 1)  single\_rectangle(25)  rectangles(12.5, 0)  rectangles(12.5, 0)  rectangles(25, 1)  single\_rectangle(25)  rectangles(12.5, 0)  rectangles(12.5, 0) | 5 - 10 |

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| Substitution trace for the rabbit population | This was a question taken nearly directly from Steele’s old exam, some numbers changed, but this was on there for a decent chunk of points  Given this function  def populations(pop, gen):  if gen == 0:  return 0  else:  return pop + populations(pop, gen - 1) - 2  What would the sub trace for populations(5, 3) look like?  populations(5, 3) 5 + (populations(5, 3 - 2)) – 2 5 + (5 + (populations(5 , 2 - 1)) - 2) – 2 5 + (5 + (5 + (populations(5, 1 - 1)) - 2) - 2) – 2 5 + (5 + (5 + (0) - 2) - 2) – 2 5 + 5 + 5 - 2 - 2 - 2 = 9 | 5-10 |
| **Closer:** Confidence in the topics | Just on a scale to 1-5, how confident are you in these topics after the session? | 1-2 |

*\*Possible processes: puzzles, informal quiz, think-pair-share, paired problem solving, graphic organizers, cheat sheets, collaborative questioning, student summaries, reviewing notes, work at the board, vocabulary…*

**Ending reminders:**

1. Did you check everyone in?
2. Did you remind everyone of the next session and any upcoming tests or quizzes or due dates?

**What is one thing you want to emphasize during this session?** Please be specific.

* These topics are complicated to understand however they are fundamental for future learning, and you should feel accomplished that you made it this far

**After session thoughts:** How did the session go? Is there anything you would like to keep/drop/change for next time and how?

* It was a no-show, mildly discouraging, but it is okay, that just means that I have to market better. I had a similar plan to last week, where the bulk of the time would be dedicated to getting a recursive problem finished then doing the exec diagram on that question

**Bi-Weekly Question:** What marketing strategies are you planning on using to promote your SI sessions?

* Well, it seems that shoutouts during class(talking before class starts and writing on the board), emails, and a discord server aren’t working, so I must start using more aggressive marketing tactics during lab sessions.  
  Also this could possibly be due to the days that I have the sessions. I can’t really do much throughout the week if my sessions are on Sunday and Monday, it would be better to have them sometime else in the week, like potentially Thursday, to at least get some of the students doing the lab and recitation.