

**SI SESSION PLAN**

|  |  |  |  |
| --- | --- | --- | --- |
| SI Leader: | Alex Iacob | Session Date: | 10/10/21 |
| Week #: | 8 | Session Letter: | A |
| Course & Section: | CSCI 141 Section 3 | Course Instructor: | Steele |
| Planning Date: | 10/10/21 | Planning Time: | 11:30 – 12:00 |

**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:**

* Selection sort
* The concept of sorting algorithms

|  |  |  |
| --- | --- | --- |
| **Topics to cover** | **Process to use\*:** | **Time** |
| **Opener:** Announcements | Lab sessions will swap after this week (important) | 2 - 3 |
| Merge sort | Discuss “divide and conquer” algorithms.  (Post session) – One of my students described this algorithm as “You take big thing and snip-snip it into smaller things” Genius description honestly.  Merge sort takes a list, chops it down into smaller lists until they are all one element in length, then merges them all back together “magically” sorted.  [8, 1, 5, 9, 2, 4, 3, 10, 6, 7]  [8, 1, 5, 9, 2] [4, 3, 10, 6, 7]  [8, 1, 5] [ 9, 2] [4, 3, 10] [6, 7]  [8, 1] [5] [9] [2] [4, 3] [10] [6] [7]  [8] [1] [5] [9] [2] [4] [3] [10] [6] [7]  [1, 5, 8] [2, 9] [3, 4, 10] [6, 7]  [1, 2, 5, 8, 9] [3, 4, 6, 7, 10]  [1, 2, 3, 4, 5, 6, 7, 8, 9, 10]  I’m going to go over this particular example, but then I’m going to give a different one so they can work on it together on the board. | 15- 20 |
| Quick sort | More divide and conquer algorithms.  Quicksort takes a list, and you get to chose an arbitrary pivot. Whatever that pivot is, you make 3 lists, one to hold values smaller than the pivot, values greater than the pivot, and values equal to the pivot. This happens recursively until all of the lists are of size 1, then they get concatenated together at the end in order. (I like choosing the last index just cause you can get it as list[-1] )  [8, 1, 5, 9, 2, 4, 3, 10, 6, 7]  [1, 5, 2, 4, 3, 6] [7] [8, 9, 10]  [1, 5, 2, 4, 3] [6] [7] [8, 9] [10]  [1, 5, 2, 4, 3] [6] [7] [8, 9] [10]  [1, 2] [3] [5, 4] [6] [7] [8] [9] [10]  [1] [2] [3] [4] [5] [6] [7] [8] [9] [10]  [1, 2, 3, 4, 5, 6, 7, 8, 9, 10] | 15 - 20 |
| **Closer:** (post session)  Talk about future classes that they have to take | After I finished my last example with quick sort, I bluntly said “Alright, this was all I had planned for today, the rest of the session is just for you guys to ask me about later classes and my honest opinions about professors.” | All remaining time |

*\*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 closing tips/strategies would you like to emphasize through sessions this week?** Please be specific.

* Read ahead and use geeks4geeks.

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

* This session was very casual, I honestly liked it. A large chunk of it was just me talking with my students about merge sort and quick sort while we just sat around a table. Since this session was basically a bonus session and they formally didn’t go over these sorting algorithms, I didn’t go into too much detail, but showed enough to build some foundation. I definitely like this sneak-peek-type session for the upcoming week if the current week was more lack-luster and the material was covered pretty easily. I think it will give more incentive for students to show up later on.

**Bi-Weekly Question:** How do you balance your responsibilities as an SI Leader and as a student? What are you planning to do to help this balance over fall break?

* I generally find this job as a lot more work that what it looks like from the outside. I was a regular at SI Sessions for both CS1 and CS2. Both Russell and Renee made this look far more effortless than what it actually is.