*2022-2023*

**OSU Supplemental Instruction Session Planning Form**

SI Leader: \_\_\_\_Thomas Morton\_\_\_\_\_\_\_\_ Week of Semester:\_\_\_\_\_\_\_\_\_8\_\_\_\_\_\_\_\_

Course: \_\_\_\_\_\_CS 1113\_\_\_\_\_\_\_\_ Instructor: \_\_\_\_\_\_\_Dr. Crick\_\_\_\_\_\_

Session Objectives

1. Students will understand for loops & while loops, their use cases, and implementation

2. Students will understand how to implement index and sentinel variables and how variable scope works with looping & branching statements.

3. Students will understand how to write a looping statement that acts as a calculator and runs indefinitely

Professor Meeting Notes:

Dr. Crick expressed the importance of understanding the different types of looping statements and their use cases. This understanding will be essential for students as they start their upcoming final project in the coming weeks.

Opening/Introductory Activity

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| Activity Name:  Shopping List | Session Objective(s) Met:  Objectives 1 & 2 | Time Allotted:  5 minutes | Materials Needed:  Whiteboard | Targeted Learning Style(s):  Audial  Visual  Kinesthetic | Bloom’s Levels Used:  Analyzing  Applying  Understanding  Remembering |
| Explanation/Notes:  Each participant will be asked to write an item on the whiteboard for a pretend shopping list. After 10-20 items have been written on the list, participants will be asked to think of what type of looping statements would be adequate for taking this list to the store.  Afterwards, participants will be asked to describe why this list would not be sufficient for the next shopping trip. A conceptual distinction will be made between this shopping list no longer being applicable and variable scope. After “leaving the store,” the “groceries” are no longer applicable to this “shopping trip.” Replace quotes with conditional statement, groceries with variable, and shopping trip with conditional statement as well. | | | | | |

Main Session Activity 1

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| Activity Name:  Bored Games | Session Objective(s) Met:  Objective 1 | Time Allotted:  15 minutes | Materials Needed:  Board game  scenarios | Targeted Learning Style(s):  Audial  Visual | Bloom’s Levels Used:  Evaluating  Analyzing  Applying  Understanding  Remembering |
| Explanation/Notes:  Participants will analyze several board games to evaluate the types of loops required for the game to be played. This activity will directly correlate with participants’ understanding of what will be required as they begin working on their final project, which is to develop their own functional board game complete with computer response.  Board games to be evaluated are Monopoly, Connect 4, Blackjack, 20 Questions, and Scrabble | | | | | |

Main Session Activity 2

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| Activity Name:  Coding Activity  (Simple Calculator) | Session Objective(s) Met:  Objectives 1, 2, & 3 | Time Allotted:  25 minutes | Materials Needed:  Computer with a Java compiler (preferred)  Or  Pencil and paper | Targeted Learning Style(s):.  Audial  Visual  Kinesthetic | Bloom’s Levels Used:  Creating  Evaluating  Analyzing  Applying  Understanding  Remembering |
| Explanation/Notes:  Participants will be asked to gather into small groups to write a simple console-based calculator. This activity will require the participants to implement a loop and track the input variable scope as they write the program. There is no definitive correct solution to this activity, just a list of criteria that must be met for the activity to be considered correct.   1. The calculator must maintain a running total of two inputs until an exit condition is entered 2. The calculator must run until the user gives an exit condition 3. The calculator must use a local input variable to store user input 4. The calculator must reuse the same sum variable to store the total 5. A print statement must output the result after each calculation 6. Any conditional statements that use variables other than the sum or total must be declared within the scope of that respective conditional   If there are not enough participants, the attending participants will discuss how they would implement a section of the program and the SI leader will code it accordingly. Questions about why the participant chose a certain approach will be asked as the program is being coded. | | | | | |

Closing Activity

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| Activity Name:  Scoping it Out | Session Objective(s) Met:  Objective 2 | Time Allotted:  5 minutes | Materials Needed:  None | Targeted Learning Style(s):  Audial | Bloom’s Levels Used:  Applying  Understanding  Remembering |
| Explanation/Notes:  Going around the room, each participant will be asked to think of a scenario where you would not want to keep track of information beyond a certain point. Examples could include your amount owed on an electric bill from last month (don’t want to pay it twice), or the speed limit driving down the highway (getting pulled over for going 75 in a 45, 55, 65, 75 zone).  Participants will then be asked to think of scenarios where they would want to ensure that certain information has been accurately stored. (Where you graduated High School, your friend’s phone number after calling them, etc.) | | | | | |

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| Plan for extra activity:  Venn Diagram  Participants will be asked to write out the similarities and differences of for and while loops on the whiteboard. Overlapping uses go in the middle; distinct uses go in the edges. | Extra notes: |