**Technical Design Document**

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**Date Created:** May 25th, 2025

**Program Description:**

This program sells exactly 20 cinema tickets. Each buyer can buy up to 4 tickets. The program prompts the user for a desired number of tickets and displays the remaining number of tickets after each sale, then repeats the process until 20 tickets have been sold. After 20 tickets are sold, the program displays the total number of buyers.

**Functions used in the Program (list in order as they are called):**

1. **Function Name:** sellTickets

**Description:** This function attempts to process a transaction, given the remaining number of tickets and the number of tickets the user is attempting to purchase.

**Parameters:**

remainingStock (integer) – Number of tickets remaining.

purchasedTickets(integer) – Desired number of tickets, supplied by user.

**Variables:** None used aside from parameters.

**Logical Steps:**

1. Verify the user is not attempting to purchase 5 or more tickets. Notify user and return current stock if they are.
2. Verify the user is not attempting to purchase 0 tickets, or a negative amount of tickets. Notify user and return current stock if they are.
3. Verify there are enough tickets remaining in stock to complete the transaction. Notify user and return current stock if they are.
4. If user is attempting to purchase a valid number of tickets, return number of tickets after the transaction is completed.

**Returns:** Remaining tickets after a sale if a sale is successfully made, remaining tickets without a sale if the sale is not successfully made.

2. **Function Name:** getInput

**Description:** This function takes a user input and attempts to convert it to an integer.

**Parameters:** No parameters taken

**Variables:** getInput(string, converted to integer) – Variable used to store user input for conversion.

**Logical Steps:**

1. Prompt user for input.
2. Attempt to convert input into an integer.
3. Return user input as an integer if conversion succeeds, prints an error and returns a default value of 0 if not.

**Returns:** userInput converted to an integer, defaults to 0 if conversion fails.

**Logical Steps:**

1. Call getInput in order to supply an input value for sellTickets.
2. Call sellTickets with the remaining ticket count, and the input returned by getInput.

**Link to your repository:** https://github.com/HenryH-SCF/COP2373

**Output Screenshot: (make sure big enough so I can see)**

