Project 1 Pseudocode

Read Auditorium

Arguments: auditorium array

Returns: auditorium array

- Open file
- While not EOF
    - Read line
    - For 0 to line length
        - Copy character in string to array
- Close file

Display Auditorium

Arguments: auditorium array

Returns: nothing

- Display column header
- For each row
    - Display row number
    - For each column
        - Display array[row][col]
    - Display newline

Reserve Seats

Arguments: auditorium array, row, seat, quantity

Returns: nothing

- For 1 to quantity
    - Array[row][seat+i] = #

Check Availability

Arguments: auditorium array, row, seat, quantity

Returns: Boolean

- For 1 to quantity
    - If array[row][seat+i] is a period
        - Return false
- Return true

Count Seats

Arguments: auditorium array

Returns: open seats and reserved seats

- Open file based on auditorium
- For each row
    - For each column
        - If array[row][col] = #
            - Increment open seats
        - Else increment reserved seats

Print Report

Arguments: none

Returns: none

- For 1 to 3
    - Call Get Seat Info function
    - Print out open seats, reserved seats, money earned
    - Increment total open seats, total reserved seats, total money earned
- Print out total open seats, total reserved seats, total money earned

Best Available

Arguments: auditorium array, row, quantity

Returns: left endpoint of best available section

- Determine middle of row
- From mid to 1 (i)
    - If array[row][i] = #
        - For 1 to quantity (j)
            - Check if array[row][i-j] = #
        - If all available
            - Left side = Hold i
- From mid to last column (i)
    - If array[row][i] = #
        - For 1 to quantity (j)
            - Check if array[row][i+j] = #
        - If all available
            - Right side = Hold i
- Return min (right side, left side - quantity)

Main

- Loop (do…while not exit)

- o Print main menu
- o Get user input
- o If user does not want to exit
  - ▪ Print auditorium
  - ▪ Get auditorium number
  - ▪ If user wants to reserve seats
    - • Ask user for row, seat and quantity
    - • Check if seats are available
    - • If available reserve seats
    - • If not available search for best available
      - o If best available, offer to user
  - ▪ If user wants to see auditorium
    - • Call display auditorium function
- • Print report