**Name:** Estiward Casado Antigua

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**Program Description:**

This program’s purpose is to sell cinema tickets. There are 20 tickets, and each buyer is limited to a maximum of 4 tickets. The user will be prompted to see how many tickets they would like, and the remaining tickets will be shown after their purchase. This process will repeat until everything is sold, and then the total number of buyers will be displayed.

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

1. **Function Name:** buying\_tickets(availabeTickets, ticketMax)

**Description:** This function has the while loop that has each buyer attempt to buy tickets.

**Parameters:**

1. availableTickets (integer) – amount of tickets available to buy
2. ticketMax (integer) – how many tickets each individual can buy

**Variables:**

* 1. buyerAmount (integer) – accumulator for loop counts how many buyers
  2. desiredTickets (integer input) – how many tickets the buyer wants, must be less than or equal to 4

**Logical Steps:**

1. Prompt user for how many tickets they want and convert to integer
2. Check if the integer is at least 0
3. If the buyer’s desired amount of tickets is less than or equal to 4 then subtract the desired amount from the tickets left
4. If the user is trying to buy more tickets than available, then restart the loop and undo the operation, if not, continue the loop
5. Display the remaining amount of tickets
6. Add to the buyerAmount accumulator
7. The loop ends when the available tickets are 0
8. Return buyerAmount

**Returns:**

1. buyerAmount (integer) – How many buyers are there
2. **Function Name:** main()

**Description:** This function calls buying\_tickets(), gets the amount of buyers from it, and displays how many buyers of the tickets there were.

**Parameters:** None

**Variables:**

1. availableTickets (integer) – the amount of available tickets
2. ticketMax (integer) – how many tickets each individual can buy
3. totalBuyers (integer) – returned buyerAmount from buying\_tickets()

**Logical Steps:**

1. availableTickets and totalBuyers are set
2. buying\_tickets() is called with availableTickets and ticketMax as the parameters
3. totalBuyers is returned from buying\_tickets()
4. totalBuyers is displayed

**Returns:** None

**Logical Steps:**

1. Call main().
2. Inside of main(), buying\_tickets() is called.

**Repository Link:** https://github.com/coppajo/COP2373