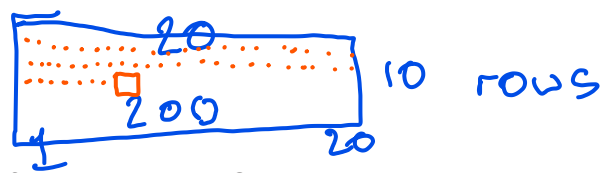THEATRE SEATS - October 2023 Paper 21

Drama students put on a performance of a play for one evening. Seats in a small theatre can be booked for this performance.

The theatre has 10 rows of 20 seats. The status of the seat bookings for the evening is held in the two-dimensional (2D) Boolean array Evening[]

1 to 10

Evening [row] [seat]

1 to 20

Each element contains FALSE if the seat is available and TRUE if the seat is booked.

validate?

BOOLEAN

Up to and including four seats can be booked at one time. Seats are allocated in order from those available. A row or seat number cannot be requested.

1 to 4

The array Evening[] has already been set up and some data stored.

Write a program that meets the following requirements:

more complex

- counts and outputs the number of seats already booked for the evening
- allows the user to input the number of seats required
- validates the input
- checks if enough seats are available:
  - if they are available
    - changes the status of the seats
    - outputs the row number and seat number for each seat booked
  - if they are **not** available:
    - outputs a message giving the number of seats left or 'House full' if the theatre is fully booked.

NOT OPTIONAL

You must use pseudocode or program code **and** add comments to explain how your code works.
You do **not** need to declare any arrays or variables; you may assume that this has already been done.
You do **not** need to initialise the data in the array Evening[]
All inputs and outputs must contain suitable messages.

INLINE comments

INPUT Ticket ; // Ask user how many tickets to buy

~~OUTPUT Ticket~~

OUTPUT "Booking is for", Ticket, "tickets"