

## 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[]`

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

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.

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

Write a program that meets the following requirements:

- 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.

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.