

Instructions:

- Compress the project folder and create a .zip file for submission.
- The general rubrics are given below:

Description	Max. Marks
Coding style Use the best practices for writing the code and using meaningful names for variables and methods with appropriate naming standards. The code is well organized and very easy to follow.	10% 10%
Logic Student has used the effective programming logic for solution and demonstrates the appropriate concept in respective task.	60%
Results The program is error-free and generates the expected results as per the specifications.	20%

Task:

Write a program to assign passengers seats in an airplane. Assume a small airplane with seat numberings as follows:

```
1 A B C D
2 A B C D
3 A B C D
4 A B C D
5 A B C D
6 A B C D
7 A B C D
```

The program should display the seat pattern, with an 'X' marking the seats already assigned. For example, after seats 1A, 2B, and 4C are taken, the display should look like the following:

```
1 X B C D
2 A X C D
3 A B C D
4 A B X D
5 A B C D
6 A B C D
7 A B C D
```

After displaying the seats available, the program should prompt for the seat desired, the user can type in a seat, and then the display of available seats should be updated.

This continues until all seats are filled or until the user signals that the program should end. If the user types in a seat that is already assigned, the program should say that that seat is occupied and ask for another choice.

Sample output is depicted in the following figures:

```
You will be selecting seats for this airplane.
```

```
1 A B C D
2 A B C D
3 A B C D
4 A B C D
5 A B C D
6 A B C D
7 A B C D
```

```
You will input the seat selection using the row number and then the seat letter (ex - 3B)
Please enter the seat number or Q to quit.
```

```
1C
```

```
1 A B X D
2 A B C D
3 A B C D
4 A B C D
5 A B C D
6 A B C D
7 A B C D
```

```
Please enter the seat number or Q to quit.
```

```
3A
```

```
1 A B X D
2 A B C D
3 X B C D
4 A B C D
5 A B C D
6 A B C D
7 A B C D
```

```
Please enter the seat number or Q to quit.
```

```
5D
```

```
1 A B X D
2 A B C D
3 X B C D
4 A B C D
5 A B C X
6 A B C D
7 A B C D
```

```
Please enter the seat number or Q to quit.
```