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1.a

```
bool pathway[8] = {[0] = true, [2] = true};
```

1.b

```
//Initializing Without Declaring the Size
bool pathway[] = {true, false, true, false, false, false, false, false};
```

2. To solve the problem, I used a 2d array to hold the data. Also, I created another array for the checker and legends. The purpose of the checker array is to determine if the point has already been visited or not.

Displaying the matrix was easy. You just have to print the 2d array and the legends using a nested for loop. This whole problem is not difficult, I was just confused with the graph since there were a lot of possibilities but the test cases that Ma'am Ara uplaoded assured me.

To determine the nearest charging station, I used a combination of while loop and for loop. I applied the former so that the loop will not end until the charging station is found, while the use of the latter is to traverse the value of each point. To understand more clearly, let's say that the user opted to go to Point 5 which is F. The value of the fifth index of the 2d array is [1,0,1,0,0,1,0,0]. Then, check each value if it is "1". We can see that the zeroth index is "1", so the value of our point now will be 0, and we will also change the value of the zeroth index of the checker array to 1. Loop did not end so we will get the value of the 0^{th} index of the 2d array which is [1,1,0,0,0,1,0,0]. In this situation, we can still see that the zeroth index's value is also "1". However, we have already visited the said index so we will proceed to another one. The next index that contains "1" is the first index, so the value of the point now will be 1 and change the value of the first index in the checker array as 1. In the 1^{st} index of the 2d array we have [1,1,1,0,0,0,0,0]. Using the same process, the value of the point is now 2 which is a charging station. This is where all loops will break since we have now arrived at the nearest charging station. To conclude, we have visited a total of 4 points from the start to the end, which is the following: F => A => B => C.

Github Link: https://github.com/dreeew05/CMSC21/tree/master/Lecture6-7/Assignments