1. What considerations would have to be taken to add a columns class? What would be the advantage?

You would have to create a way for the program to differentiate row access and column access.

You could make a column class if you wanted to access the column before accessing the row.

1. What is forward declaration and how is it used? Why does it work?

Forward declaration is telling the program that a function will exist without needing to know at that time what the function does.

It is used when two classes use each other.

It works because it acts in the same way as a prototype for a function. You know what will go into it and what it looks like even though you don’t know what it does.

1. What would the code look like to rotate a 2d array by 90 degrees?

You would have to copy the array and then use for loops to move the objects in the array around.

What would be the big-O notation for this operation?

The big-0 would be 0(n2)