

Problem 3.2.6. See handout. As per the problem, write a program to compute the determinant of a matrix. (If you refer to a Linear Algebra text, you may find the minors are called co-factors.) It should read a matrix, print it out, compute and print the determinant. Your program should be able to evaluate multiple matrices on a single execution. For class purposes your program should handle matrices upto and including those of order 6. In a real application the sizes could, of course, be much larger. Use of recursion is okay but not mandatory. Use some form of linked list structure to store the matrix. You may use double, single, circular or multilinked lists with or without headers. Please give this careful consideration.

In justifying your choice of data structures please consider real world constraints. Justify your choice of recursion or iteration. Be sure to compare your results to what you observed in Lab 2. As a minimum use the following 8 matrices to test your program. Use the same required input and the same input format as Lab 2.

```
[5]      2  3      3 -2  4
          5  9      -1  5  2
              -3  6  4
```

```
2 4 5 6      2 4 5 6
0 3 6 9      0 0 0 0
0 0 9 8      0 0 9 8
0 0 0 5      0 0 0 5
```

```
2 0 0 0      2 4 0 6
0 3 0 0      1 3 0 0
0 0 9 0      4 0 0 8
0 0 0 5      2 5 0 5
```

```
6 4 6 4 6 4
1 2 3 4 5 6
6 5 4 3 2 1
3 2 3 2 3 2
4 6 4 6 4 6
1 1 1 1 1 1
```