Lab 8 – Exercise 2
Transpose a matrix

GIVENS : *(none)*
RESULT : *(none)*
INTERMEDIATES : a *(reference to a matrix of integers)*
nRows *(number of rows in the matrix)*
nCols *(number of columns in the matrix)*
at *(reference to the transpose of the matrix)*
HEADER : main()
BODY :

```
(Get the data from the user)
print("Enter the number of rows in matrix A:  ")
nRows ← readInteger()
print("Enter the number of columns in matrix A:  ")
nCols ← readInteger()
(Call the algorithm to read in the create and read in values for the matrix)
a ← readIntMatrix(nRows, nCols)   (assume the algorithm is available)
 (Call the algorithm to transpose the matrix)
at ← transpose (a, nRows, nCols)
(Print the results – assume the algorithm is available)
printMatrix(at, nRows, nCols)
```

GIVENS:

a *(reference to a matrix)*
nRows *(number of rows in the matrix)*
nCols *(number of columns in the matrix)*

RESULT:

at *(reference to the transposed matrix)*

INTERMEDIATES

tRow *(row index of the transposed matrix)*
tCol *(column index of the transposed matrix)*

HEADER: at ← transpose(a, nRows, nCols)