

## Quiz #7

Name:

1. Function `Average` returns the average of the numbers in matrix `M`. For instance, if `M` is a shown below, `Average` returns 3.5.

```
1.0 4.0 3.0
6.0 2.0 5.0
```

Complete function `Average` started below:

```
// Pre: M has more than zero rows and more than zero columns
// Post: The average of the values in M is returned.
double Average( const apmatrix<double> & M )
{
```

2. Write a `main` that opens a file named `"input.txt"`, and then prints the average of the `double` values contained in a matrix represented in the file. You may assume that the file exists, and thus you do not have to check the state of the stream; you also may use the simplest form for `open` (in other words, you do not need the second parameter). The first two entries in the file are integers that tells you how many rows and columns are in a matrix. The subsequent numbers are the matrix entries. Those numbers are to be read into an `apmatrix`, and then the average is to be computed by calling the function in part 1.

```
int main( )
{
    ifstream fin;
    apmatrix<double> M;
    int NumberOfRows, NumberOfCols;
    int r, c;
```