CSCI 1300 Recitation HW 8

Question 1:

```
#include <iostream>
#include <string>
using namespace std;
int main()
{
    int size = 7; //changed size to 7
    //cannot init array during run time
    double scores[7] = {85.4, 90.3, 100, 89, 74.5, 95.0, 82.3};
    double sum = 0;
    for(int i = 0; i < size; i++)
    {
        sum += scores[i];
    }
    int avg = sum / size; //changed 6.0 to size
    cout << "Average=" << avg << endl;
    return 0;
}
```

Question 2:

```
#include <iostream>
using namespace std;

// Function to calculate the transpose of a matrix
void transposeMatrix(int matrix[][3], int n, int m)
{
    for (int i = 0; i < n; i++)
    {
        for (int j = i + 1; j < m; j++)
        {
            int temp[n][m]; //must define matrix before used
            temp[i][j] = matrix[i][j];
            matrix[i][j] = matrix[j][i];
            matrix[j][i] = temp[i][j];
        }
    }
}

int main()
{
    const int rows = 3;
    const int cols = 3;
```

```
    int originalMatrix[rows][cols] =
    {
        {1, 1, 1},
        {2, 2, 2},
        {3, 3, 3}
    };

    // Calculate the transpose matrix using the function
    transposeMatrix(originalMatrix, rows, cols); //pass by reference

    // Display the transpose matrix
    cout << "Transpose Matrix:" << endl;
    for (int i = 0; i < rows; i++)
    {
        for (int j = 0; j < cols; j++)
        {
            //cout original matrix
            cout << originalMatrix[i][j] << " ";
        }
        cout << endl;
    }

    return 0;
}
```

Question 3:

```
#include <iostream>
using namespace std;

int main()
{
    int N = 4; //N=4
    //changed array type to string
    string item[] = {"book", "pen", "pencil", "eraser"};

    //printing all the items
    for (int i = 0; i < N; i++)
    {
        //changed index in item to i
        cout << "The item list has " << item[i] << endl;
    }
    return 0;
}
```

Question 4:

```
#include <iostream>
#include <string>
using namespace std;

int main()
{
    const int N = 6;
    string animals[N] = {"lion", "cat", "bear", "dog", "elephant", "fox"};
    for (int i = 0; i < N; i++)
    {
        if (animals[i].length() == 4) //changed location of [i]
        {
            cout << animals[i] << endl;
        }
    }
    return 0;
}
```

Question 5:

5.a

```
declare function matrixSum that takes two integer matricies a, b
declare an integer matrix temp of size 2, 3
set temp to a+b
set a to temp
end

declare main function
declare matrix m1 of size 2, 3
declare matrix m2 of size 2, 3
output "Enter values for matrix 1, one row at a time:"
take input into matrix m1
```

```
#include <iostream>
#include <string>
using namespace std;

void matrixSum(int a[2][3], int b[2][3]){
    for (int i = 0; i < 2; i++){
        for (int j = 0; j < 3; j++){
            int temp[2][3];
            temp[i][j] = a[i][j]+b[i][j];
            a[i][j] = temp[i][j];
        }
    }
```

```
}


int main()
{
    int m1[2][3];
    int m2[2][3];
    cout << "Enter values for matrix 1, one row at a time:" << endl;
    cin >> m1[0][0];
    cin >> m1[0][1];
    cin >> m1[0][2];

    cin >> m1[1][0];
    cin >> m1[1][1];
    cin >> m1[1][2];

    cout << "Enter values for matrix 2, one row at a time:" << endl;
    cin >> m2[0][0];
    cin >> m2[0][1];
    cin >> m2[0][2];

    cin >> m2[1][0];
    cin >> m2[1][1];
    cin >> m2[1][2];

    matrixSum(m1, m2);
    cout << "The sum is:" << endl;
    for (int i = 0; i <2; i++){
        for(int j = 0; j < 3; j++){
            cout << m1[i][j] << "-";
        }
        cout << "\n";
    }
}
```

coding telephone:

there was not enough time for everyone to do their part of the code. below is the code from James Benish-Kingsbury, the last person to do it in our group.

```
void suggestActivity(string[] ,int num );
cout << "Day" << num << arr[num] << endl;

int main()
int integer = 3;
string type;
```