Reality Check: Week 8

Word Problem (Question #1)

View the following C++ programming code, complete the program and generate its output:

Write a user function named Lower_half() which takes a two dimensional array Ary2D, with size N rows and N columns as argument and prints the lower half of the array.

For Example: if Ary2D is = The output will be:

2	3	1	5	0		2				
7	1	5	3	1		7	1			
2	5	7	8	1	=	2	5	7		
0	1	5	0	1		0	1	5	0	
3	4	9	1	5		3	4	9	1	5

Hint: Sample Code

```
void Upper_half(int b[ ][10], int N)
{
     int i, j;
     for (i = 0 ; i<N; i++)
      {
          for (j =0 ; j < N; j++)
          {
               if (I > = j)
                    cout<< b[i][j] <<" ";
          else
                    cout << " ";
          }
          cout<< " \n ";
     }
}
```

Word Problem (Question #2)

Complete the C++ programming code and generate its output:

Write a function int ALTERSUM (int B[][5], int N, int M) in C++ to find and return the sum of elements from all alternate elements of a two-dimensional array starting from B[0][0].

Hint: Sample Code

```
int ALTERSUM(int B[ ][3], int N, int M)
{
     int sum = 0;
     for (int  I = 0; I<N; I++)
     {
          for (int J = 0; J < M; J++)
          {
               if( I + J ) %2 = = 0)
                    sum = sum + B[I][J];
          }
     }
return sum;
}
```

Word Problem (Question #3)

Complete the C++ programming code and generate its output:

Write a function in C++ which accepts a 2D array of integers and its size as arguments and displays the elements which lie on diagonals.

Hint: Sample Code

```
const int n = 5;
     void Diagonals( int A[n][n], int size)
     {    int i, j;
          cout << " Diagonal One";
     for (i=0 ; i<n; i++)
          cout << A[i][i]<< " ";
          cout<< "Diagonal Two";
     for (i = 0; i<n; i++)
          cout<<A[i][n-(i+1)]<< " "
}
```

Word Problem (Question #4)

Complete the C++ programming code and generate its output:

Write a function in C++ which accepts a 2D array of integers and its size as arguments and displays the elements of middle row and the elements of middle column.

Hint: Sample Code

```
const int S = 5;
void DisplayMidle( int A[S][S], int S)
{    int mid = S/2;
     int i;
     cout << " \n Middle row";
     for (i=0 ; i<S; i++)
          cout << A[ mid ][ i ]<< " ";
          cout<< " \n Middle Column ";
     for (i = 0; i<S; i++)
          cout<<A[i][ mid ]<< " "
     cout << endl;
}
```