CSE115L – Computing Concepts Lab

Declaring and accessing the elements of a two-dimensional array:

```
int main()
{
    int A[100][100], i, j, rows, columns;
    printf("Number of rows: ");
    scanf("%d",&rows);
    printf("Number of columns: ");
    scanf("%d",&columns);
    for(i=0;i<rows;i++)
    {
        for(j=0;j<columns;j++)
        {
            printf("A[%d][%d]: ",i, j);
            scanf("%d",&A[i][j]);
        }
    }
    printf("Values in array A:\n");
    for(i=0;i<rows;i++)
    {
        for(j=0;j<columns;j++)
        {
            printf("%10d ",A[i][j]);
        }
        printf("\n");
    }
    return 0;
}
```

Problems:

1. Write a function that returns the number of times a value (key) appears in an array.

```
int countSearchKey(int arr[], int size, int key);
```

Sample Output 1:

```
Enter array size: 5
Array Elements: 7  3  4  8  1
Search Key: 4
Search Key appears 1 times
```

Sample Output 2:

```
Enter array size: 7
Array Elements: 2  3  2  9  2  10  6
Search Key: 2
Search Key appears 3 times
```

2. Write a program that computes the sum of a specific column (provide by user as input) in a 2D array.

Sample Output:

```
Enter number of rows:  3
Enter number of columns:  4
Enter elements:  2    3    6   7
                 4    8    1   5
                 9    0    7   2
Enter which column to find sum of: 2
Sum of column 2: 11
```