TASK#1:

```c
#include<stdio.h>
int main(){
int arr[3][3];
int i,j;
int symmetric=1;

printf("Enter elements of 3X3:");
for(i=0;i<3;i++){
    for(j=0;j<3;j++){
        scanf("%d",&arr[i][j]);
    }
}
for(i=0;i<3;i++){
    for(j=0;j<3;j++){
        if(arr[i][j]!=arr[j][i]){
            symmetric=0;
            break;
        }
    }
    if(!symmetric)
        break;

    }
    if(symmetric)
    printf("the matrix is symmetric.\n");

    else
    printf("the matrix is not symmetric.\n");

    return 0;
}
```

```
C:\Users\student25\Documen
Enter elements of 3X3:6
7
5
4
8
3
8
7
5
the matrix is not symmetric.

--------------------------------
Process exited after 12.77 seconds with return value 0
Press any key to continue . . .
```

TASK #2:

```c
#include<stdio.h>
int main(){

int i,j,space;


for(i=1;i<=5;i++){
    for(space=i;space<5;space++){
        printf(" ");
        }

    for(j=1;j<=i;j++){
        printf("%d",j);
    }
    printf("\n");
}
    return 0;
}
```

```
C:\Users\student25\Documen
    1
   12
  123
 1234
12345

--------------------------------
Process exited after 0.007129 seconds with
Press any key to continue . . .
```

TASK#3:

```c
#include <stdio.h>

int main() {
    int n;
    int i, j;
    printf("Enter the size of the square matrix (n): ");
    scanf("%d", &n);

    int matrix[n][n];

    printf("Enter the elements of the matrix (%d x %d):\n", n, n);
    for ( i = 0; i < n; i++) {
        for (j = 0; j < n; j++) {
            scanf("%d", &matrix[i][j]);
        }
    }

    int mainDiagonalSum = 0, secondaryDiagonalSum = 0;


    for ( i = 0; i < n; i++) {
        mainDiagonalSum += matrix[i][i];
        secondaryDiagonalSum += matrix[i][n - 1 - i];
    }

    int totalSum = mainDiagonalSum + secondaryDiagonalSum;


    if (n % 2 == 1) {
        totalSum -= matrix[n / 2][n / 2];
    }

    printf("\nSum of main diagonal: %d", mainDiagonalSum);
    printf("\nSum of secondary diagonal: %d", secondaryDiagonalSum);
    printf("\nTotal sum of both diagonals: %d\n", totalSum);

    return 0;
}
```

```
C:\Users\student25\Documen
Enter the size of the square matrix (n): 4
Enter the elements of the matrix (4 x 4):
5
6
7
3
5
6
7
8
9
6
5
5
4
3
5
6

Sum of main diagonal: 22
Sum of secondary diagonal: 20
Total sum of both diagonals: 42

--------------------------------
Process exited after 18.15 seconds with return value 0
Press any key to continue . . .
```