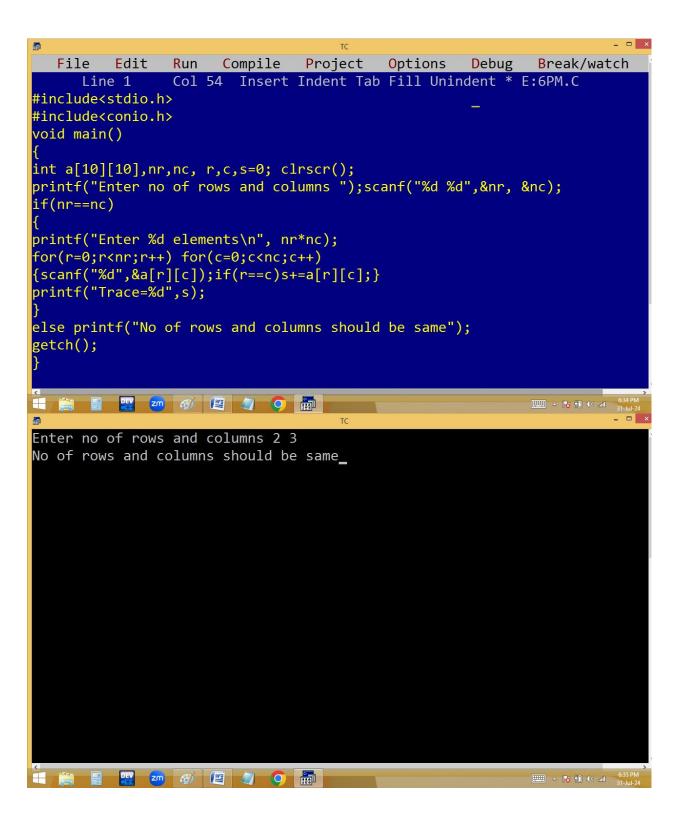
Transpose of n*n matrix:

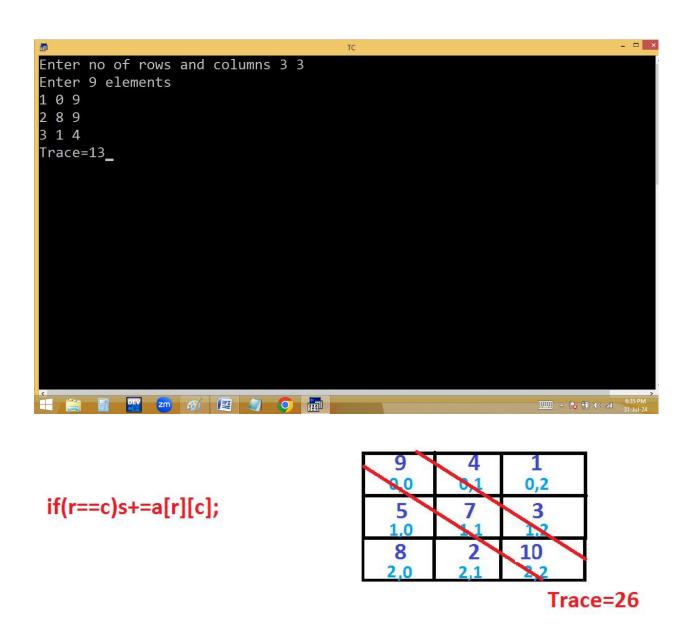
```
_ 🗆 ×
#include<stdio.h>
#include<conio.h>
void main()
int a[10][10],nr,nc, r,c; clrscr();
printf("Enter no of rows and columns ");scanf("%d %d",&nr, &nc);
printf("Enter %d elements\n", nr*nc);
for(r=0;r<nr;r++) for(c=0;c<nc;c++)scanf("%d",&a[r][c]);
puts("Transposed Elements ");
for(c=0;c<nc;c++)
for(r=0;r<nr;r++)
printf("%4d",a[r][c]);
printf("\n");
getch();
_____ ^ [3] (1) and 6:241
Enter no of rows and columns 2 3
Enter 6 elements
1 2 3
4 5 6
Transposed Elements
      4
  2
      5
  3
      6
  △ 🔯 🗓 (b) and 6:24 PM
```

Method2:

```
_ 🗆 ×
#include<stdio.h>
#include<conio.h>
void main()
int a[10][10],nr,nc, r,c; clrscr();
printf("Enter no of rows and columns ");scanf("%d %d",&nr, &nc);
printf("Enter %d elements\n", nr*nc);
for(r=0;r<nr;r++) for(c=0;c<nc;c++)scanf("%d",&a[r][c]);
puts("Transposed Elements ");
for(r=0;r<nc;r++)
for(c=0;c<nr;c++)
printf("%4d",a[c][r]);
printf("\n");
getch();
Enter no of rows and columns 2 3
Enter 6 elements
1 2 3
4 5 6
Transposed Elements
      4
  2
      5
  3
      6
  🚆 🖫 🚾 💋 🧿 🛗
                                                     △ 🔯 🗓 (I) and 6:29 PM
```

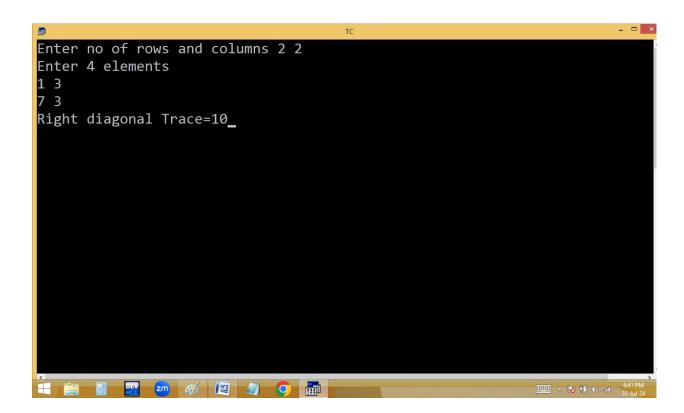
Finding trace of n*n matrix:

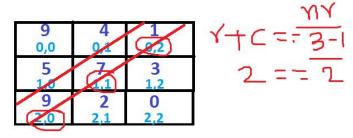




Finding trace of right diagonal elements:

```
_ 🗆 ×
File Edit Run Compile Project Options
                                                Debug Break/watch
              Col 24 Insert Indent Tab Fill Unindent * E:6PM.C
#include<stdio.h>
#include<conio.h>
void main()
int a[10][10],nr,nc, r,c,s=0; clrscr();
printf("Enter no of rows and columns");scanf("%d %d",&nr, &nc);
if(nr==nc)
printf("Enter %d elements\n", nr*nc);
for(r=0;r<nr;r++) for(c=0;c<nc;c++)
{scanf("%d",&a[r][c]);if(r+c==nr-1)s+=a[r][c];}
printf("Right diagonal Trace=%d",s);
else printf("No of rows and columns should be same");
getch();
____ ^ * 10 (*) and 31
Enter no of rows and columns 3 3
Enter 9 elements
1 2 0
3 4 5
7 8 9
Right diagonal Trace=11_
      △ 🔯 🗓 (b) and 6:40 PM
```





```
_ 🗆 ×
#include<stdio.h> #include<conio.h>
void main()
int a[10][10],nr,nc, r,c,e,o,z; clrscr();
printf("Enter no of rows and columns ");scanf("%d %d",&nr, &nc);
printf("Enter %d elements\n", nr*nc);
puts("\t Even \t Odd \t Zero");
puts("---------");
for(r=0;r<nr;r++)
for(c=e=o=z=0; c<nc;c++)
if(a[r][c]==0)z++; else if(a[r][c]%2==0)e++; else o++;
printf("%d-row \t %d \t %d \t %d\n",r+1,e,o,z);
getch();
                                               _____ ^ 7:0 (b) and 31-
Enter no of rows and columns 2 5
Enter 10 elements
12300
46150
       Even Odd Zero
1-row
                  2
2-row
      2
           2
                   1
     _____ ^702 PM
```

Finding no of even/odd/zero elements row wise

```
puts("\t Even\tOdd\tZero");
                                    rceoz
 puts("----");
                                   0 01201 0120
                                   1 0/10 0/230
 for(r=0;r<3;r++)
                                   2 0|20|10 0|
 {
c for(c=e=o=z=0:c<3;c++)
 { if(a[r][c]%2==0)
 if(a[r][c]==0)z++;else
                               e++;else o++;
 p("%d-row\t%d\t%d\t%d\n",r+1,e,o,z);
                 2 0
     1-row 1
    2-row
3-row
                  3 0
0 1
```

9	4 0,1	1 0,2
5 1,0	7 1,1	3 1,2
8	2 2.1	0

	Even	Odd	Zero
1-row	1	2	0
2-row	0	3	0
3-row	2	0	1

```
_ 🗆 ×
#include<stdio.h> #include<conio.h>
void main()
int a[10][10],nr,nc, r,c,e,o,z; clrscr();
printf("Enter no of rows and columns ");scanf("%d %d",&nr, &nc);
printf("Enter %d elements\n", nr*nc);
puts("\t Even \t Odd \t Zero");
puts("------");
for(r=0;r<nc;r++)
for(e=o=z=c=0; c<nr;c++)
if(a[c][r]==0)z++; else if(a[c][r]%2==0)e++; else o++;
printf("%d-col \t %d \t %d \t %d\n",r+1,e,o,z);
getch();
                                               ____ ^ [3] (b) and 31-
Enter no of rows and columns 3 4
Enter 12 elements
1 2 3 4
0000
1 3 5 7
      Even Odd
                   Zero
1-col
      0
            2
                  1
2-col
      1
            1
                   1
3-col
      0
             2
                   1
4-col
      1
             1
                   1
     _____ ^ 7:24 PM 31-Jul-24
```

```
Finding no of even/odd/zero elements row wise
                                                       puts("\t Even\tOdd\tZero");
                                                              0,1
                                     rceoz
                                                              7
                                                                    3
                                     0 01201 0120
                                    1 0/10 0/230
for(r=0;r<\frac{nc}{r++})
                                                              2
                                                                    0
                                    2 0|20|10 0|
for(c=e=o=z=0:c< rc++)
                                                          Even Odd Zero
{ if(a[c][r]%2==0)
                                                                2
                                                                      0
if(a[c][r]==0)z++;else
                                e++;else o++;
                                                     2-col 2
                                                                1
                                                                      0
                                                                      1
                                                     3-col 0
                                                                2
p("%d-row\t%d\t%d\t%d\n",r+1,e,o,z);
                                                                      0
    1-row 1
                  2 0
```

Finding row and column sum:

9	4	13
0,0	0,1	0,2
5	7	12
1,0	1,1	1,2
14 2,0	11 2,1	2,2

Read n stu's id, name, marks in 6 sub's and find tot, avg and pass / fail as follows.

i i	id	name	tel	eng	hin	mat	sci	soc	tot	avg	p/f
1											
n											