Name: Akib Reza

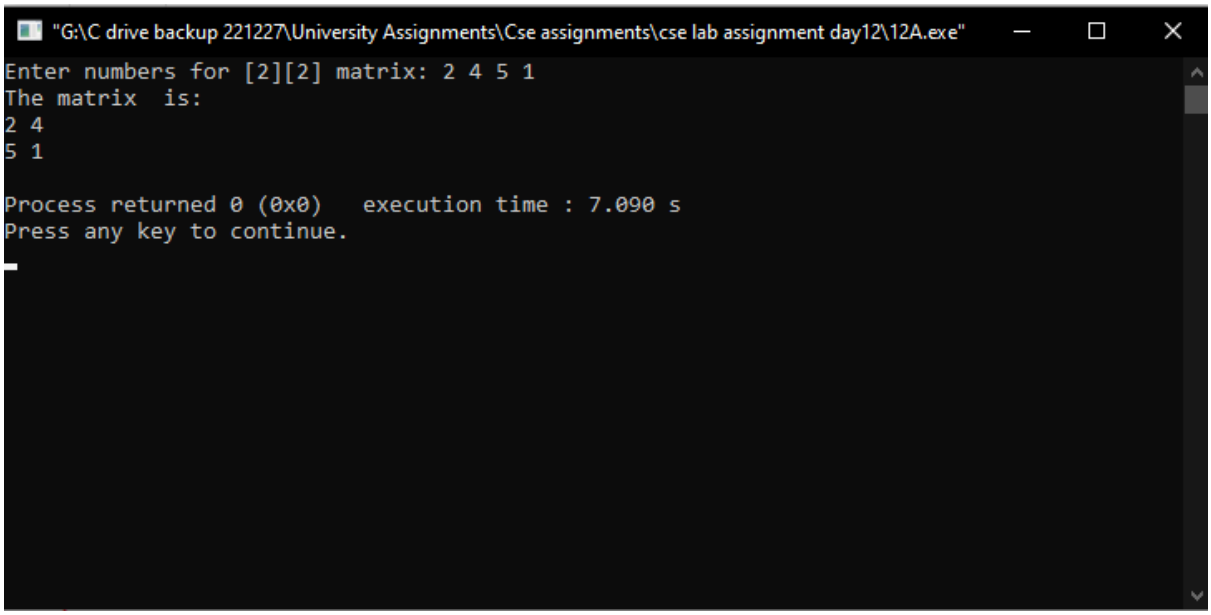
ID: 0432220005101061

12A:

Input:

```c
//Name : Akib Reza
//ID: 0432220005101061

#include <stdio.h>
int main()
{
   int arr[2][2];

   printf("Enter numbers for [2][2] matrix: ");
   for(int i = 0; i<2; i++)
   {
      for(int j = 0; j<2; j++ )
      {
         scanf("%d",&arr[i][j]);
      }
   }

   printf("The matrix  is: \n");

    for(int i = 0; i<2; i++)
   {
      for(int j = 0; j<2; j++ )
      {
         printf("%d ",arr[i][j]);
      }
      printf("\n");
   }
}
```

Output:



12B:

Input:

12A.c | 12B.c | 12C.c | 12D.c

```c
//Name : Akib Reza
//ID: 0432220005101061

#include <stdio.h>
int main()
{
    int arr1[2][2];
    int arr2[2][2];
    printf("1st matrix: \n");
    for(int i = 0; i<2; i++)
    {
        for(int j = 0; j<2; j++ )
        {
            scanf("%d",&arr1[i][j]);
        }
    }
    printf("2nd matrix: \n");
    for(int i = 0; i<2; i++)
    {
        for(int j = 0; j<2; j++ )
        {
            scanf("%d",&arr2[i][j]);
        }
    }
    printf("Addition: \n");
     for(int i = 0; i<2; i++)
    {
        for(int j = 0; j<2; j++ )
        {
            printf("%d ",arr1[i][j]+arr2[i][j]);
        }
        printf("\n");
    }
}
```

Output:

```
"G:\C drive backup 221227\University Assignments\Cse assignments\cse lab assignment day12\12B.exe"
1st matrix:
4 2 1 9
2nd matrix:
2 2 4 6
Addition:
6 4
5 15

Process returned 0 (0x0)   execution time : 8.332 s
Press any key to continue.
```

12C:

Input:

12A.c | 12B.c | *12C.c | 12D.c

```c
//Name : Akib Reza
//ID: 0432220005101061

#include <stdio.h>
int main()
{
    int arr1[2][2];
    int arr2[2][2];
    printf("Matrix 1 : \n");
    for(int i = 0; i<2; i++)
    {
        for(int j = 0; j<2; j++ )
        {scanf("%d",&arr1[i][j]);}}
    printf("Matrix 2: \n");
    for(int i = 0; i<2; i++)
    {
        for(int j = 0; j<2; j++ )
        {scanf("%d",&arr2[i][j]);}
    }
    int x[2][2];
    for(int i=0; i < 2; i++)
    {
        for(int j=0; j < 2; j++)
        {
            x[i][j] = 0;
            for(int k=0; k < 2; k++){x[i][j] += arr1[i][k]*arr2[k][j];}
        }
    }
    printf("After multiplying matrix 1 and matrix 2 : \n");
    for(int i = 0; i<2; i++)
    {
        for(int j = 0; j<2; j++ )
        {printf("%d ",x[i][j]); }
        printf("\n");
    }
}
```

Output:

```
"G:\C drive backup 221227\University Assignments\Cse assignments\cse lab assignment day12\12C.exe"
Matrix 1 :
5 1 5 2
Matrix 2:
7 8 3 2
After multiplying matrix 1 and matrix 2 :
38 42
41 44

Process returned 0 (0x0)   execution time : 4.460 s
Press any key to continue.
```

12D:

Input:

12A.c | 12B.c | 12C.c | 12D.c

```c
//Name : Akib Reza
//ID: 0432220005101061

#include <stdio.h>
#include <string.h>
int main()
{
   char name1[50];
   char name2[50];



   printf("Enter 1st string: ");
   scanf("%s",name1);
   printf("Enter 2nd string: ");
   scanf("%s",name2);

   //STRLEN
    printf("Length of 1st string: %d\n", strlen(name1));
    printf("Length of 2nd string: %d\n", strlen(name2));


    //STRCMP
   if (strcmp(name1, name2) ==0)
    {
      printf("The strings are same.\n");
    }else
    {
       printf("The strings are different.\n");
    }

    //STRCAT
   printf("After concatenation: %s",strcat(name1,name2));
}
```

Output:

```
"G:\C drive backup 221227\University Assignments\Cse assignments\cse lab assignment day12\12D.exe"
Enter 1st string: lionel
Enter 2nd string: messi
Length of 1st string: 6
Length of 2nd string: 5
The strings are different.
After concatenation: lionelmessi
Process returned 0 (0x0)   execution time : 11.529 s
Press any key to continue.
```