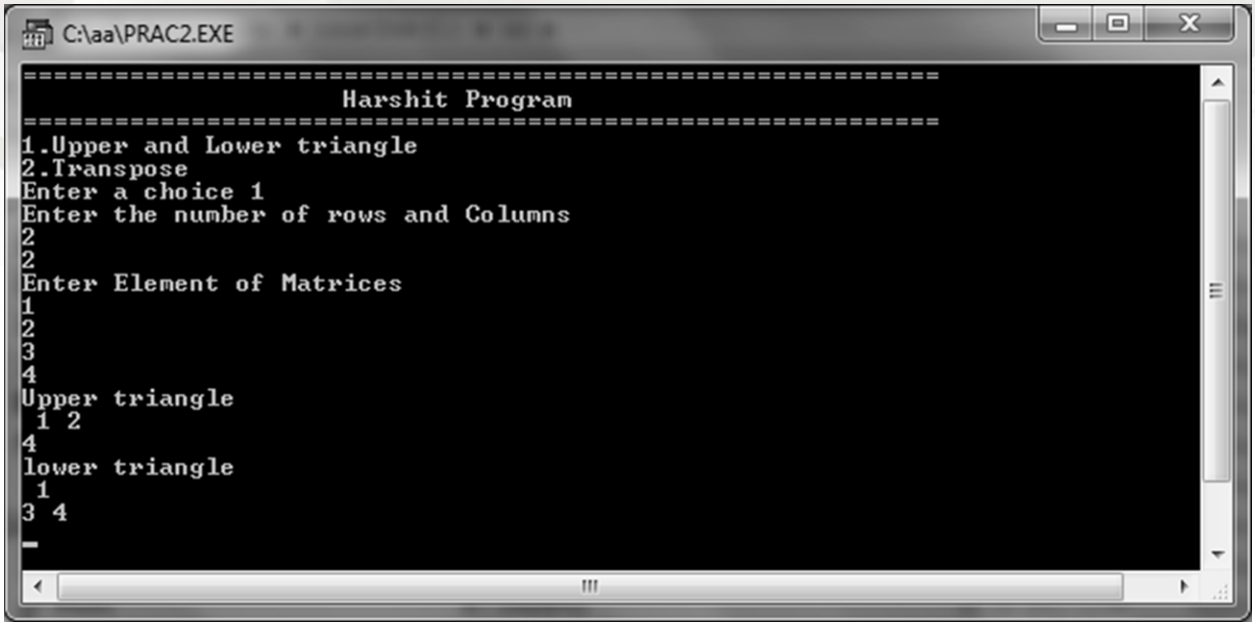
Aim: To write a program to perform certain action on an Matrice according to the given command

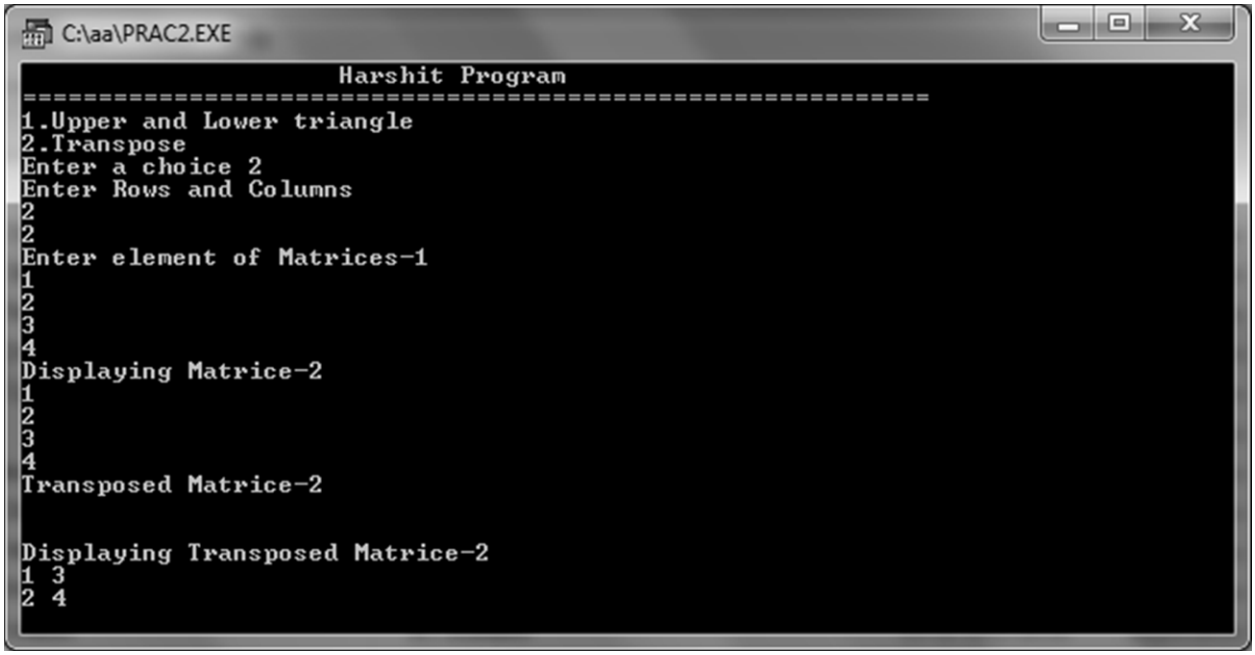
Source Code:

```
#include<iostream.h>
#include<conio.h>
#include<process.h>
void main()
{     int A[10][10],m,n,i,j,ans,B[10][10];
      clrscr();
      int ch;
      cout<<"============================================================\n";
      cout<<"                      Harshit Program                       \n";
      cout<<"============================================================\n";
      cout<<"1.Upper and Lower triangle\n";
      cout<<"2.Transpose\n";
      cout<<"Enter a choice ";
      cin>>ans;
      if(ans==1)
      {
            cout<<"Enter the number of rows and Columns";
            cin>>m>>n;
            if(m!=n)
            {     cout<<"Triangle not possible";
            }
            cout<<"Enter Element of Matrices";
            for(i=0;i<m;i++)
            {     for(j=0;j<n;j++)
                  {     cin>>A[i][j];
                  }
            }
            cout<<"Upper triangle\n ";
            for(i=0;i<m;i++)
            {     for(j=0;j<n;j++)
                  {     if(i<=j)
                        {     cout<<A[i][j]<<" ";
                        }
                  }
                  cout<<"\n";
            }
            cout<<"lower triangle\n ";
            for(i=0;i<m;i++)
            {     for(j=0;j<n;j++)
                  {     if(i>=j)
                        {     cout<<A[i][j]<<" ";
                        }
                  }
```

```
                cout<<"\n";
            }
        }
        if(ans==2)
        {
            cout<<"Enter Rows and Columns ";
            cin>>m>>n;
            cout<<"Enter element of Matrices-1\n";
            for(i=0;i<m;i++)
            {     for(j=0;j<n;j++)
                  {     cin>>A[i][j];
                  }
            }
            cout<<"Displaying Matrice-2\n";
            for(i=0;i<m;i++)
            {
                  for(j=0;j<n;j++)
                  {     cout<<A[i][j]<<" ";
                        cout<<"\n";
                  }
            }
            cout<<"Transposed Matrice-2\n";
            for(i=0;i<m;i++)
            {
                  for(j=0;j<n;j++)
                  {
                        B[i][j]=A[j][i];
                  }
                  cout<<"\n";
            }
            cout<<"Displaying Transposed Matrice-2\n";
            for(i=0;i<m;i++)
            {     for(j=0;j<n;j++)
                  {
                        cout<<B[i][j]<<" ";
                   }
                   cout<<"\n";
            }
        }
        getch();
}
```

Output:


C:\aa\PRAC2.EXE
Harshit Program
1.Upper and Lower triangle
2.Transpose
Enter a choice 1
Enter the number of rows and Columns
2
2
Enter Element of Matrices
1
2
3
4
Upper triangle
1 2
4
lower triangle
1
3 4


C:\aa\PRAC2.EXE
Harshit Program
1.Upper and Lower triangle
2.Transpose
Enter a choice 2
Enter Rows and Columns
2
2
Enter element of Matrices-1
1
2
3
4
Displaying Matrice-2
1
2
3
4
Transposed Matrice-2
Displaying Transposed Matrice-2
1 3
2 4