

prog. 25: Write a program to declare a square matrix A [] [] of order N (N < 20). Allow the user to input positive integers into this matrix. Perform the following tasks on the matrix:

- Output the original matrix.
- Find the SADDLE POINT for the matrix. A saddle point is an element of the matrix such that it is the minimum element for the row to which it belongs and the maximum element for the column to which it belongs. Saddle point for a given matrix is always unique. If the matrix has no saddle point, show the message "NO SADDLE POINT".

Test your program for the following data and some random data:

Sample data:

Input: n=4

Matrix A [] [] =

2	5	6	9
8	4	12	3
6	7	3	1
12	24	2	11

Output:

Matrix A [] [] =

2	5	6	9
8	4	12	3
6	7	3	1
12	24	2	11

[ISC Model]

No Saddle Point

//A program for saddle point number

```
import java.util.*;
```

```
class saddle
```

```
{
```

```
public static void main (String args[])
```

```
{
```

```
Scanner in=new Scanner(System.in);
```

```
int n, i, j, k, max, f=0, min, c;
```

```
System.out.println("Enter matrix size");
```

```
n=in.nextInt();
```

```
int a[][]=new int[n][n];
```

```
for(i=0;i<n;i++)
```

```
{
```

```
for(j=0;j<n;j++)
```

```
{
```

```
System.out.println("Enter Value");
```

```
a[i][j] = in.nextInt();
```

```
}
```

```
}
```

```
System.out.println("Matrix elements are:");
```

```
for(i=0;i<n;i++)
```

```
{
```

```
for(j=0;j<n;j++)
```

```
{
```

```
System.out.print(a[i][j] + " ");
```

```
}
```

```
System.out.println();
```

```
}
```

```
for(i=0;i<n;i++)
```

```
{
```

```
7/4 min = a[i][0];
```

```
c=0;
```

```
for(j=0;j<n;j++)
```

```
{
```

```
if(a[i][j] < min)
```

```
{
```

```
min = a[i][j];
```

```
c=j;
```

```
}
```

```
}
```

```
max = a[0][c];
```

```
for(k=0;k<n;k++)
```

```
{
```

```
if(a[k][c] > max)
```

```
max = a[k][c];
```

```
}
```

```
if(max == min)
```

```
{
```

```
System.out.println("Saddle Point No. " + max);
```

```
f=1;
```

```
}
```

```
}
```

```
if(f == 0)
```

```
{
```

```
System.out.println("No Saddle Point No. in the Matrix ");
```

```
}
```

```
}
```

```
}
```

min = A[i][0]

4 ₀₀	5 ₀₁	6 ₀₂
7 ₁₀	8 ₁₁	9 ₁₂
5 ₂₀	1 ₂₁	3 ₂₂