9. Find Minimum Cost Spanning Tree of a given undirected graph using Prim's algorithm.

```
import java.util.Arrays;
import java.util.Scanner;
public class Prims {
        static int a[][];
        static int V;
        public static void main(String args[])
        {
                System.out.println("Enter the number of vertices\n");
                Scanner scanner = new Scanner(System.in);
                V = scanner.nextInt();
                a = new int[V][V];
                System.out.println("Enter the Cost Matrix \n");
                for (int i = 0; i < V; i++)
                {
                        for (int j = 0; j < V; j++)
                        {
                                a[i][j] = scanner.nextInt();
                        }
                }
                Prim();
                scanner.close();
        }
        public static void Prim()
        {
           int no_edge=0,sum=0;
           boolean[] selected = new boolean[V];
           Arrays.fill(selected, false);
           selected[0] = true;
           System.out.println("Edge : Weight");
           while (no_edge < V - 1)
           {
            int x=0,y=0,min = 999;
            for (int i = 0; i < V; i++)
            {
             if (selected[i] == true)
             {
              for (int j = 0; j < V; j++)
              {
               if (!selected[j] && a[i][j] != 0)
               {
                if (min > a[i][j])
                  min = a[i][j];
                  x=i;
                  y=j;
               }
              }
```

```
                }
               }
               System.out.println(x + " - " + y + " :  " + a[x][y]);
               sum=sum+a[x][y];
               selected[y] = true;
               no_edge++;
              }
              System.out.println("Cost of Tree: "+sum);
             }
}
```