

Prims algorithm:

```
#include <stdio.h>
#include <limits.h>
int main() {
    int V, i, j;
    printf("Enter number of vertices: ");
    scanf("%d", &V);
    int graph[V][V];
    printf("Enter the adjacency matrix (0 if no edge):\n");
    for(i = 0; i < V; i++)
        for(j = 0; j < V; j++)
            scanf("%d", &graph[i][j]);
    int selected[V];
    for(i = 0; i < V; i++) selected[i] = 0;
    selected[0] = 1; // start from vertex 0
    int edges = 0, x, y;
    printf("Edge : Weight\n");
    while(edges < V - 1) {
        int min = INT_MAX;
        x = 0;
        y = 0;
        for(i = 0; i < V; i++) {
            if(selected[i]) {
                for(j = 0; j < V; j++) {
                    if(!selected[j] && graph[i][j]) {
                        if(graph[i][j] < min) {
                            min = graph[i][j];
                            x = i;
                            y = j;
                        }
                    }
                }
            }
        }
        printf("%d - %d : %d\n", x, y, graph[x][y]);
    }
```

```
        printf("%d - %d : %d\n", x, y, graph[x][y]);
        selected[y] = 1;
        edges++;
    }

    return 0;
}
```

Output

```
Enter number of vertices: 2
Enter the adjacency matrix (0 if no edge):
1
4
6
4
Edge : Weight
0 - 1 : 4

=== Code Execution Successful ===
```

OUTPUT:-