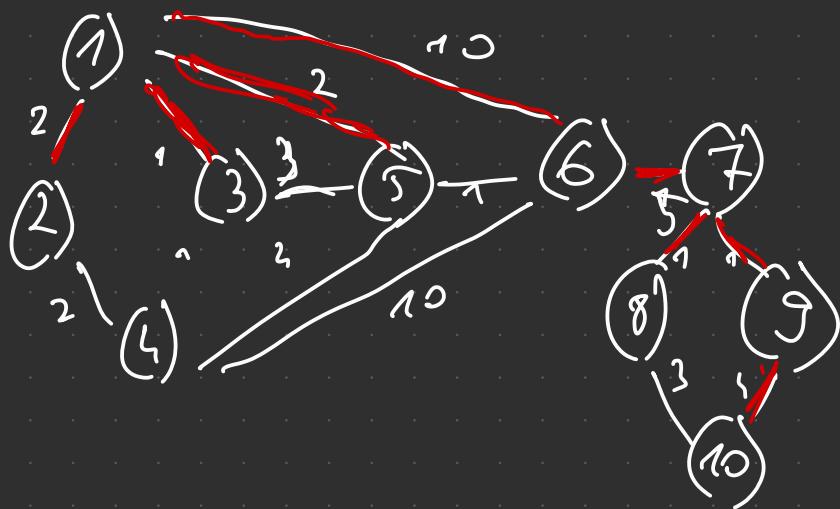


Arboi de Acoperire Minimi



prim: \cup
 $\{1\}$

$N - U$
 $\{2, 3, 4, 5, 6, 7, 8, 9, 10\}$

$n:$	U	$N - U$
1	$\{1\}$	$\{2, 3, 4, 5, 6, 7, 8, 9, 10\}$
2	$\{1, 2\}$	$\{3, 4, 5, 6, 7, 8, 9, 10\}$
3	$\{1, 2, 3\}$	$\{4, 5, 6, 7, 8, 9, 10\}$
4	$\{1, 2, 3, 4\}$	$\{5, 6, 7, 8, 9, 10\}$
5	$\{1, 2, 3, 4, 5\}$	$\{6, 7, 8, 9, 10\}$
6	$\{1, 2, 3, 4, 5, 6\}$	$\{7, 8, 9, 10\}$
7	$\{1, 2, 3, 4, 5, 6, 7\}$	$\{8, 9, 10\}$
8	$\{1, 2, 3, 4, 5, 6, 7, 8\}$	$\{9, 10\}$
9	$\{1, 2, 3, 4, 5, 6, 7, 8, 9\}$	$\{10\}$
10	$\{1, 2, 3, 4, 5, 6, 7, 8, 9, 10\}$	$\{\}$

arc
 1-3
 3-4
 4-2
 1-5
 5-6
 6-7
 7-8
 7-9
 8-10

```

void prim (G) {
    for pas = 1, n+1
        min = 999; mini=-1; minj=-1;
        for i
            for j
                if ( != )
                    min = A[i][j]
                    mini = i;
                    minj = j;
    v(i) = v(j) = 1;
    print mini, minj, A[mini][minj]
}
    
```

(*) $A[i][j] \neq 0 \quad \& \quad U[i] \neq U[j] \quad \& \quad mnu > A[i][j]$

Kruskal

$\{1, 2\} \{3, 4\} \dots \{10\}$ 7-8
 $\{1, 2\} \{3, 4\} \dots \{7, 8\} \{9, 10\}$ 7-9
 $\{1, 2, 3, 4\} \{5, 6\} \{7, 8, 9\} \{10\}$ 1-3
 $\{1, 2, 3, 4, 5, 6\} \{7, 8, 9\} \{10\}$ 3-4
 $\{1, 2, 3, 4, 5, 6, 7\} \{8, 9\} \{10\}$ 5-6
 $\{1, 2, 3, 4, 5, 6, 7, 8, 9\} \{10\}$ 2-5

Implementation

$s[i] \in X$
 $i \in X$
 $S[i] = ;$

$\{1, 2\} \{3, 4\} \{5, 6\} \{7, 8\} \{9, 10\}$ 7-8
 $\{1, 2\} \{3, 4\} \{5, 6\} \{7, 8\} \{9, 10\}$ 7-9
 $\{1, 2\} \{3, 4\} \{5, 6\} \{7, 8, 9\} \{10\}$ 1-3
 $\{1, 3\} \{2\} \{4, 5\} \{6\} \{7, 8, 9\} \{10\}$ 3-4
 $\{1, 3, 4\} \{2\} \{5\} \{6\} \{7, 8, 9\} \{10\}$ 2-5
 $\{1, 2, 3, 4\} \{5, 6\} \{7, 8, 9\} \{10\}$ 1-5
 $\{1, 2, 3, 4, 5, 6\} \{7, 8, 9\} \{10\}$ 6-2
 $\{1, 2, 3, 4, 5, 6, 7, 8, 9\} \{10\}$ 8-10

```

void kruskal(G)
{
    for i=1 to m
        for j=1 to n
            min = 999; mini=-1; minj=-1;
    }
}
    
```

```

    for i
        for j
            if ( != )
                min = A[i][j]
                mini = i;
                minj = j;
    }
}
    
```

(**)

print mini, minj, A[mini][minj]

** for i=1 to m
 $s[i] == \{m, n\}$
 $S[i] = S[mini]$

void PC (----x) mod init, mod dest
g.push(x) Cooda!!

while (!g.empty())

mod = g.pop(); if is mod; if mod = dest break

for i=1,n

{if !visit[i] & [mod](i) == -1

visit[i]=1;

g.push(i);

predecessor[i]=mod;

}()

x)

if (!visit[dest])

print min dm;

exit;

current = dest

while (current != -1) {

print current;

current = predecessor[current];