ER2024

① $n > 0$
$0 < K \in n$ $\Big\}$ $P(n, K) = P(n-1, K-1) + P(n-1, K)$,

```
function P(n, K)
    if (n ≥ 1 or K ≥ 1 or k = n)
        return 1
    for cur in 1,-,n:
        return (P(n-1, K-1) + P(n-1, K)
```

```
function main (n):
    for i in 1,-,n:
        for j in 1,-,i:
            print (P(i,j))
        print ("\n")
```

② ⓐ

ⓑ
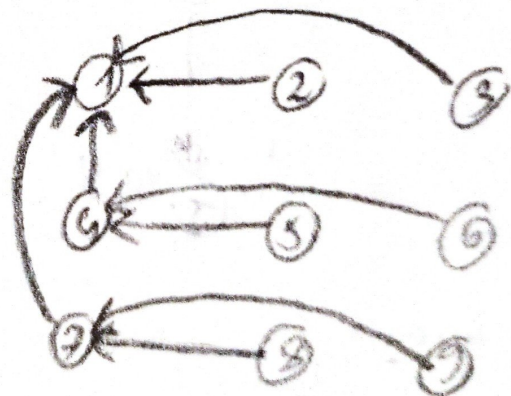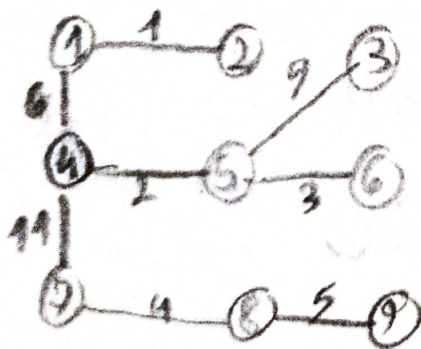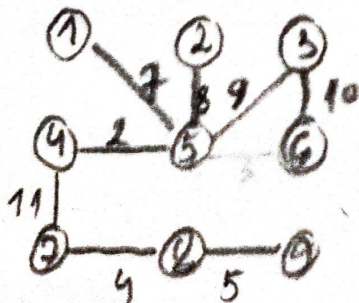
	1	2	3	4	5	6	7	8	9
d =	∞	∞	0	∞	∞	∞	∞	∞	∞
	16	17		11	9	10	22	26	31

5 6 4 1 2 7 8 9

③
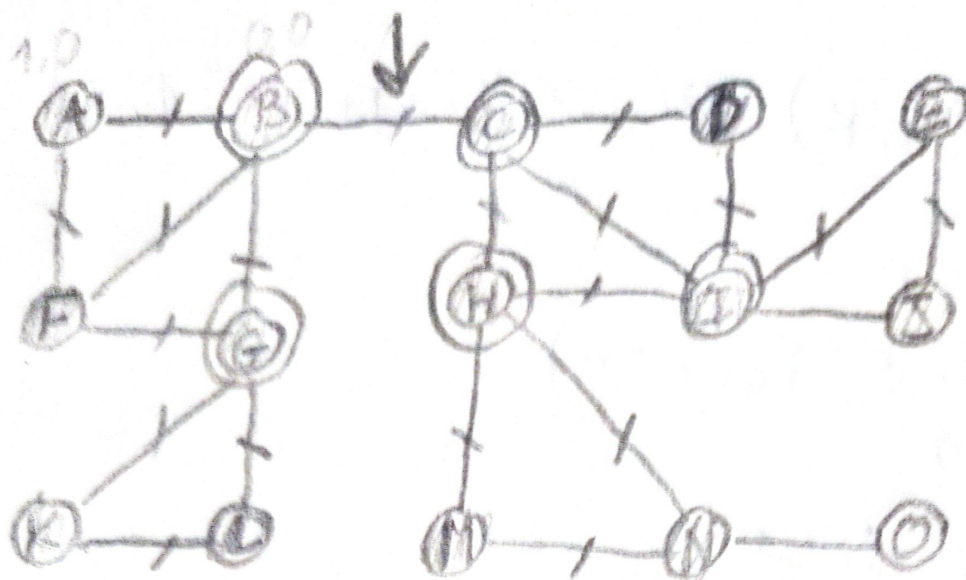
< dfs, low >

APs and bridges

G, H, J, C, B, <B,C>

④
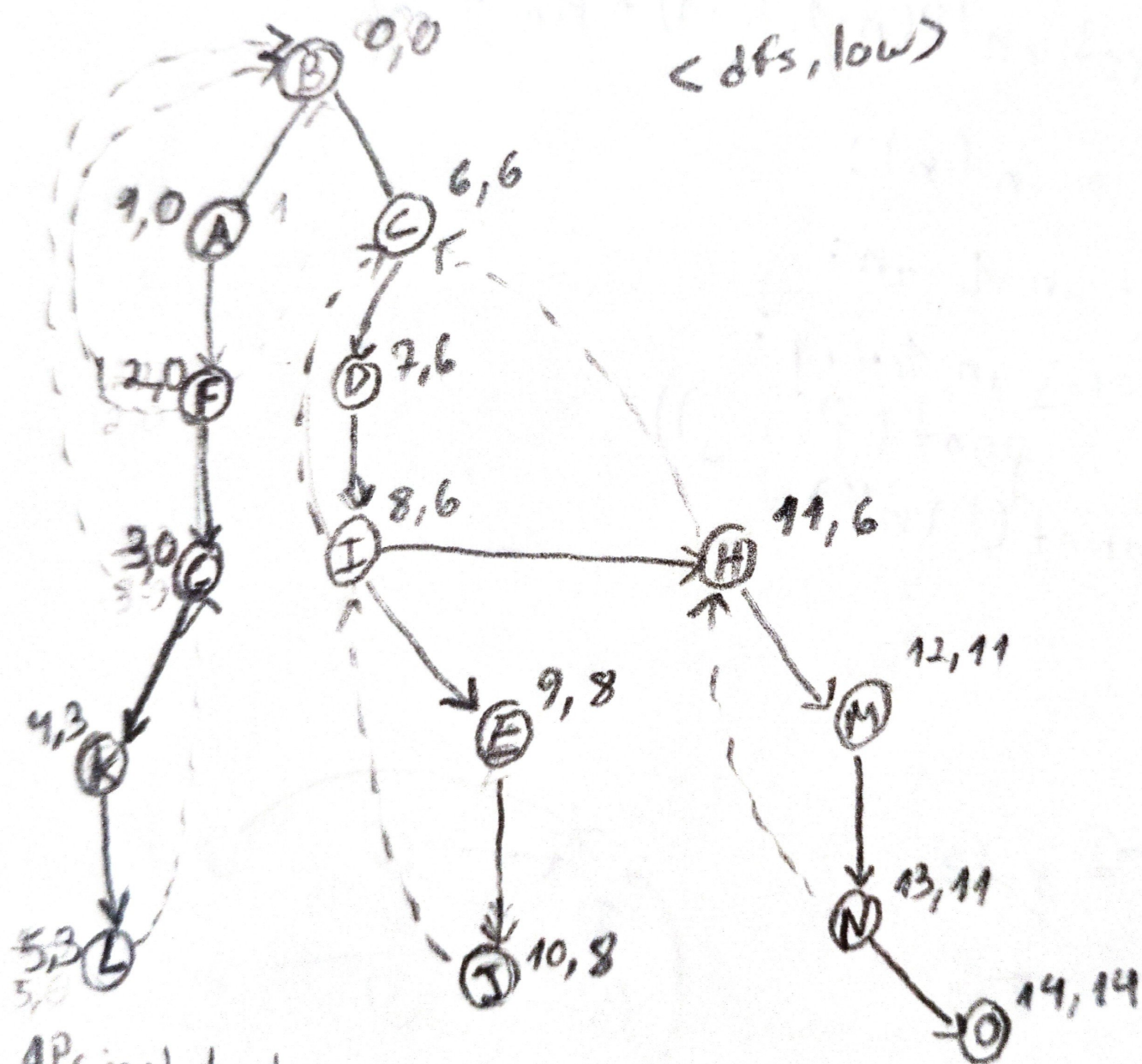
```
función D(n,m,d):
    for idx in 0,...,n:
        dp[idx,0] = ∞
    for idx in 0,...,m:
        dp[0,idx] = ∞ d;;

    for i in 1,...,n:
        dp[
        for j in 1,...,m:
            dp[i,j] = 0; m1,m2,m3 = ∞
            if i-1 > 1
                m1 = dp[i-1,j]
            if j-1 > 1
                m2 = dp[i,j-1]
            if (j-1>1) and (i-1>1):
                m3 = dp[i-1,j-1]

            dp[i,j] = d[j] + min(m1, m2, m3)

    return dp[n,m]
```

Temporal: $O(n^2)$ call $D(n,n,d)$
Espacial: $O(n^2)$