KNAPSACK

$$(H,P,V,n) \begin{cases} 0 & \text{se } H<0 \text{ o } n<0 \\ \text{MAX}\ (v_1, v_2) & \text{se } H>0 \text{ e } n>0 \\ & \text{MaxValue} = \max_{0<K<M-1} K + \text{MaxValue}((V-K), M-\omega K) \end{cases}$$

ROD-CUT

$$r_n = \begin{cases} 0 & \text{se } n == 0 \\ r_n = \max_{0 \le k \le n} \{P[k] + r[n-k]\} & \text{se } n \ge 1 \end{cases}$$

MATRIX-CHAIN

$$M[i,j] = \begin{cases} 0 & \text{se } i == j \\ \min_{i<k<j} \left(m[i,k] \cdot m[k+1,j] + P[i-1]P[k]P[j] \right) & \text{se } i<j \end{cases}$$

ACTIVITY-SELECTOR

$$C[i,j] = \begin{cases} 0 & \text{se } S_{i,j} = \emptyset \\ \text{MAX}\ \{C(i,k) + C(k+1,j) + 1\} \end{cases}$$

LCS

$$C[i,j] \begin{cases} 0 \text{ se } i=0 \text{ o } j=0 \\ c[i-1][j-1]+1 \text{ se } i,j>0 \text{ e } x_i = y_i \\ \text{MAX}(C[i-1][j], C[i][j-1]) \text{ se } i,j>0 \text{ e } x_i \neq y_i \end{cases}$$

ARCO

APSP

$$W = \begin{cases} 0 & \text{se } i = j \\ w(i,j) & \text{se } \exists (i,j) \in E \\ \infty & \text{se } \nexists (i,j) \in E \end{cases}$$

numero di archi usati

$$D^{m}[i,j] = \min_{\forall 1 \le k \le m} \left(D^{m-1}[i,k] + W[k,j] \right)$$

FLOYD - WARSHALL

D^0 : MATRICE DI ADIACENZA

$$D^{k}[i,j] = \min_{1 \le k \le m} \left(D^{k-1}[i,j], D^{k-1}[i,k] + D^{k-1}[k,j] \right)$$