Formule 3° Esercizio Basi di Dati

- Hash

$$\underset{Dir}{Record} \times Blocco = \left\lfloor \frac{Block\ Size}{P_{size}} \right\rfloor = Puntatori \times Blocco$$

$$N°Blocchi \times Bucket\ Dir = \frac{\lceil N°Bucket \rceil}{Record \times Blocco}$$

$$Blocchi \times Bucket = \frac{\lceil Record \times Bucket \rceil}{Record \times Blocco}$$

$$\underset{Buk}{Record} \times Blocco = \left\lfloor \frac{Block\ size - Pointer\ size}{Record\ size} \right\rfloor$$

$$Record \times Bucket = \frac{\lceil N°Record \rceil}{N°Bucket}$$

$$Avg\ Time = \frac{\lceil Blocchi \times Bucket \rceil}{2}$$

- ISAM

$$Record \times Blocco\ Index = \left\lfloor \frac{Block\ size}{Pointer\ size + key\ size} \right\rfloor$$

$$Record \times Blocco = \frac{\lceil Block\ size \rceil}{Record\ size}$$

$$Total\ Blck\ Main = \frac{\lceil N°Record \rceil}{Record \times Blocco}$$

$$\text{Total Block Index} = \frac{\lceil \text{Total Block Main} \rceil}{\text{Record} \times \text{Blocco Index}}$$

$$T_{Accesso} = \log_2(\text{Total Block Index}) + 1$$

B-Tree

SE VOGLIO PIENO AL MIN. $\frac{\lceil \text{Blk size}/2 \rceil}{R_{size}}$

$$\text{Record} \times \text{Blocco} = \frac{\text{Blk Size}}{\lfloor R_{size} \rfloor}$$

$$\text{ToT Blocks file Primario } (\text{Tot Blk M}) = \frac{\lceil N^{\circ} \text{Record} \rceil}{\text{Rec per Blk}}$$

$$N^{\circ} \text{Keys} \leq \frac{\text{Blk Size} - P_{size}}{\lfloor P_{size} + K_{size} \rfloor} + 1 =$$

SE VOGLIO RIEMPIRE L'ALBERO ALMAX $\Rightarrow$ MIN N° ACCESSI

$$d = \frac{\lceil (\text{Blk Size}/2) - P_{size} \rceil}{P_{size} + K_{size}} + 1 =$$

SE VOGLIO RIEMPIRE L'ALBERO ALMIN $\Rightarrow$ MAX N° ACCESSI

$$\text{Liv } \phi \quad \frac{\lceil \text{ToT Blocks file Primario} \rceil}{m/d} = 506$$

$$\text{Liv } 1 \quad \frac{\lceil \text{Liv } \phi \rceil}{m/d} = 13$$

$$\text{Liv } 2 \quad \frac{\lceil \text{Liv } 1 \rceil}{m/d} = 1 \Rightarrow \text{MI FERMO}$$

Tot Blocchi File Indice = Tot Blocchi File Primario + Liv 0 + Liv 1 + Liv 2

Il costo è il n° di livelli = 3