Duc

Mohsen

Aufgabe 3.1:

Annahme: Wir haben N Datensätze

a/ TID mit 10% der Daten umgespeichert wurden

Min = 45 Zugriffe

Max = (N + N\*0.1) Zugriffe

b/DBK

Min = 45 Zugirffe

Max = N Zugriffe

c/B+ Baum mit Höher 3

Min = 45 + 3 Zugriffe

Max = N + 3 Zugriffe

Aufgabe 3.2:

Run length Encoding

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | 1 | 1 | 5 | 5 | 7 | 7 | 7 | 13 | 20 | 33 | 33 | 13 | 23 | 20 | 5 |
| consecutive | 2 | | 2 | | 3 | | | 1 | 1 | 2 | | 1 | 1 | 1 | 1 |

Differential Encoding

|  |  |
| --- | --- |
| 1 | 1 |
| 1 | 0 |
| 5 | 4 |
| 5 | 0 |
| 5 | 0 |
| 7 | 2 |
| 7 | 0 |
| 7 | 0 |
| 13 | 5 |
| 13 | 0 |
| 20 | 7 |
| 20 | 0 |
| 23 | 3 |
| 33 | 10 |
| 33 | 0 |

Bit Vektor Encoding

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| ID | 1 | … | 5 | … | 7 | … | 13 | … | 20 | … | 23 | … | 33 |
| 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 5 | 0 | 1 | 0 | 0 | 0 | 0 | 0 |
| 5 | 0 | 1 | 0 | 0 | 0 | 0 | 0 |
| 7 | 0 | 0 | 1 | 0 | 0 | 0 | 0 |
| 7 | 0 | 0 | 1 | 0 | 0 | 0 | 0 |
| 7 | 0 | 0 | 1 | 0 | 0 | 0 | 0 |
| 13 | 0 | 0 | 0 | 1 | 0 | 0 | 0 |
| 20 | 0 | 0 | 0 | 0 | 1 | 0 | 0 |
| 33 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| 33 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| 13 | 0 | 0 | 0 | 1 | 0 | 0 | 0 |
| 23 | 0 | 0 | 0 | 0 | 0 | 1 | 0 |
| 20 | 0 | 0 | 0 | 0 | 1 | 0 | 0 |
| 5 | 0 | 1 | 0 | 0 | 0 | 0 | 0 |