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I hereby pledge that I will strictly adhere to academic integrity codes and the work done one this examination is solely my own and I will not receive give any help from/to anybody or source during this examination

7) Compare NoSQL and SQL database. What are the differences? Explain each one in detail. Which database (NoSQL or SQL) makes more more sense to use it. Describe your reasons

2) What is a multilevel indexing? Explain details. Draw diagram. What are the advantages and disadvantages of using it. (In this question I expect you to describe a general multilevel indexing model, not a specific one)

3) How do you use B+ Tree for inserting. Draw the diagram of it (not as data structure. Explain characteristic of usage of B+ Tree for inserting (not as a data structure)

1) SQL database have Table and relation. NoSQL use data storage with JSON. Usually database oculiity select in business world. select query should be faster than insert delete etc. query. NoSQL faster select than SQL.

NoSQL have data in data; example   SQL

Patient

```
"Name":" ",
"Surname":" ",
"age" : " ",
"docts":[{
    "Name":
    "surname":
    "branch":
}]
;
```

Patient		
Name	Surname	age

Doctor		
Name	Surname	age

NoSQL: MongoDB Redis Dynamo DB
SQL: Mssql MySQL. Oracle

2) Multi level insexing goal access fastly to data. If we have
olot of data or billion registery then database activity
very expensive. So we use insexing easy access data.
Multi level insexing speroke the data for easy
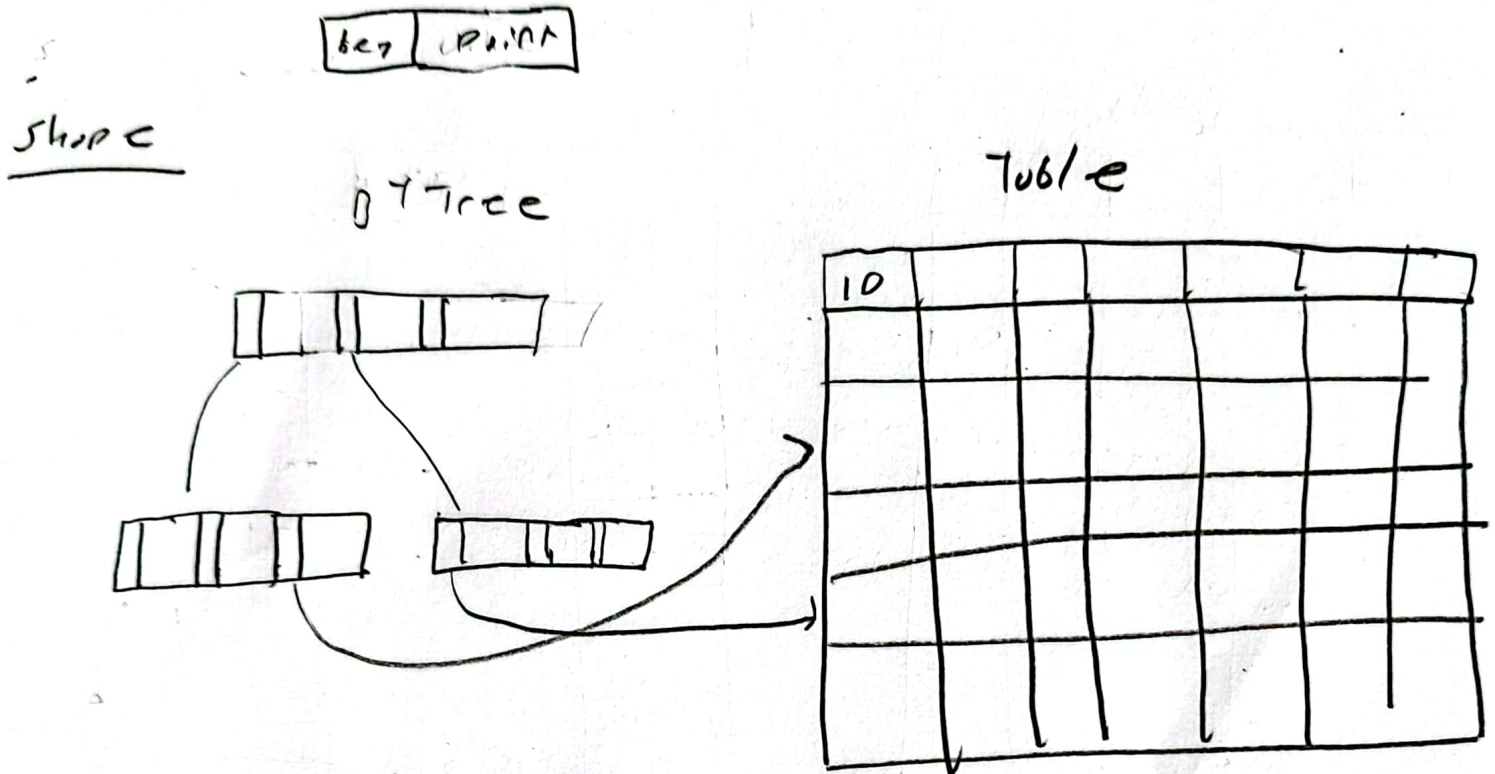access. insexing has key point relation. one level

| key | Point |

example

| 2 | 75 |

Table

7	
2	75
3	
4	
5	
6	
9	

| 77 |
| 12 |
| 75 |
| 14 |
| 75 |
| 76 |
| 7+ |
| 18 |
| 79 |
| 20 |
| 27 |
| 22 |
| 27 |

| 30 |
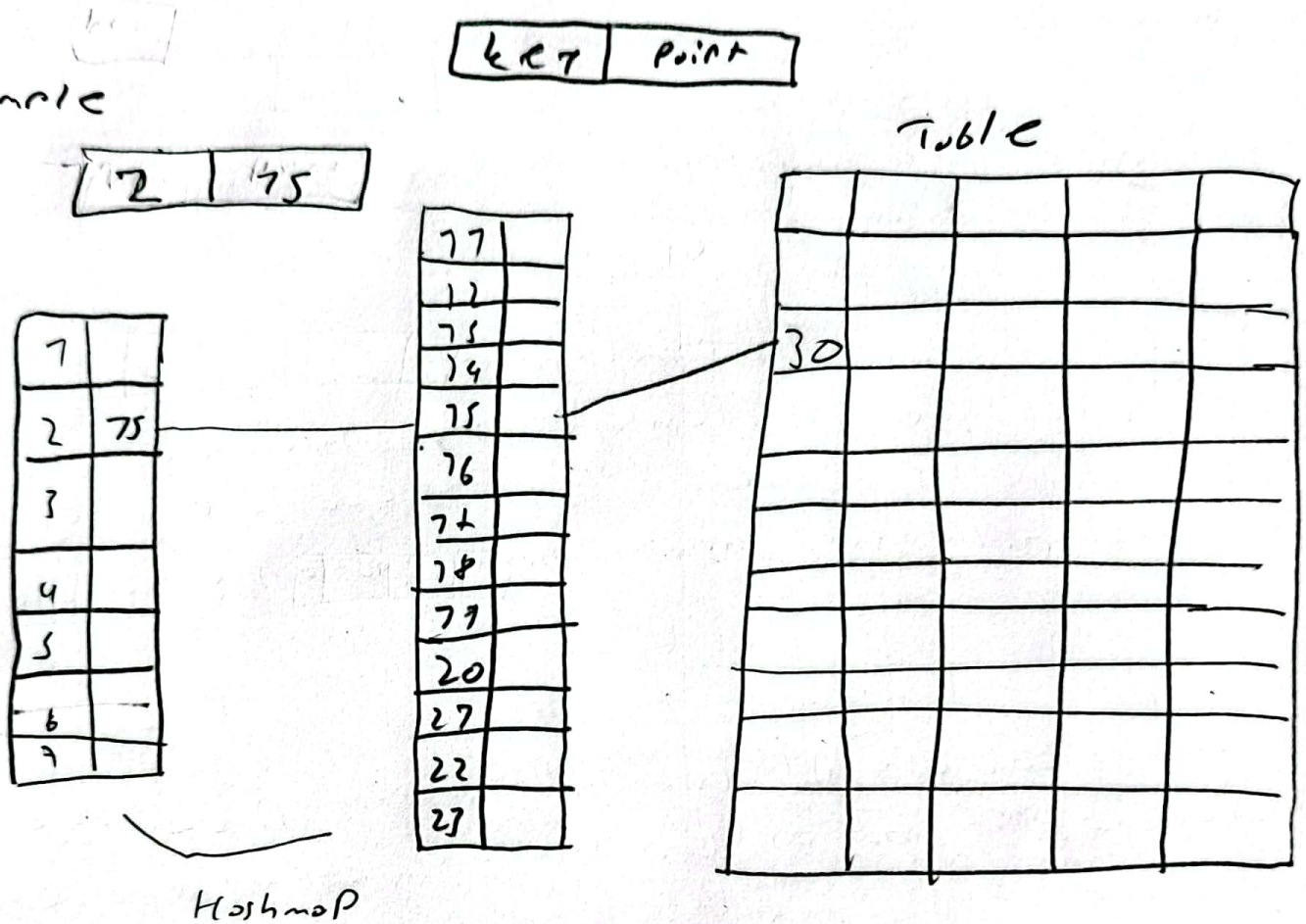
Hashmap

one level insexing use small data multi level insexing
use bigger data. trouble data

This problem :if+too olot of data and hashmap small
will collession. collession

Another proble if delete data in table we delete
other hash map.

3) B tree ons of tree generally use database implementation
B+ tree access data easly. Because space another data
don't look search. Some binary tree. Binary tree
seach every search branch seperate data disiele
2. B+tree inseating data then access databses table

key	point

Shape
_____

B+Tree

Table

B+tree useful database access because we don't
look all data.