

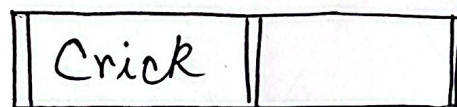
Quiz-2

(1)

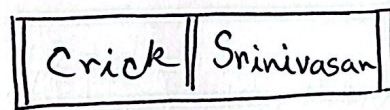
Insertion : Crick, Srinivasan, Katz, Brandt,
Kim, Wu, Singh, El Said, Califieri, Mozart,
Einstein, Gold

B⁺ tree

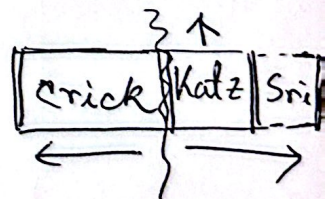
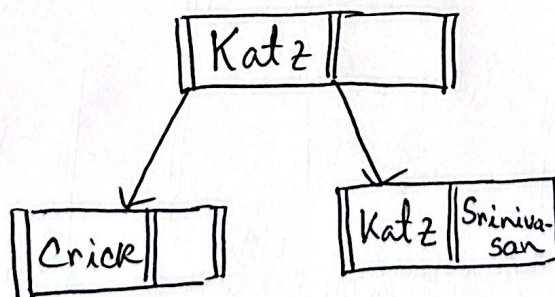
insert Crick :



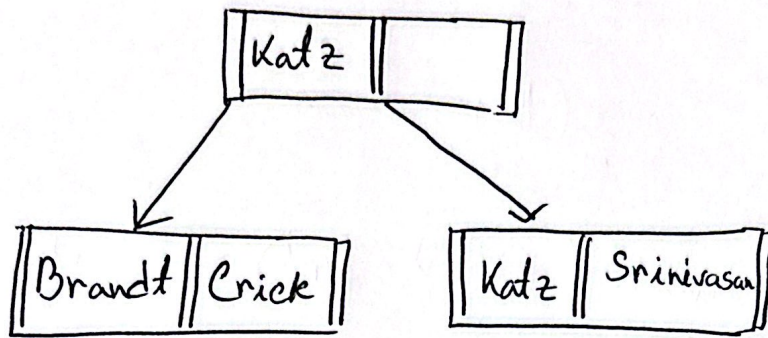
insert Srinivasan :



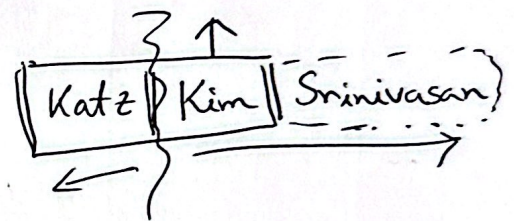
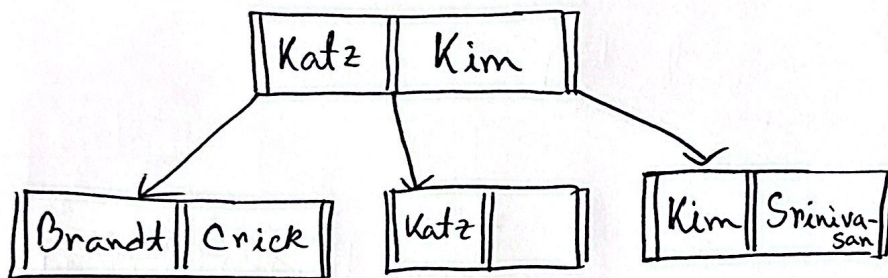
insert Katz :



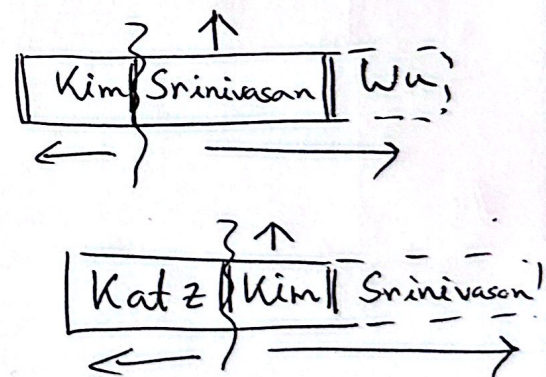
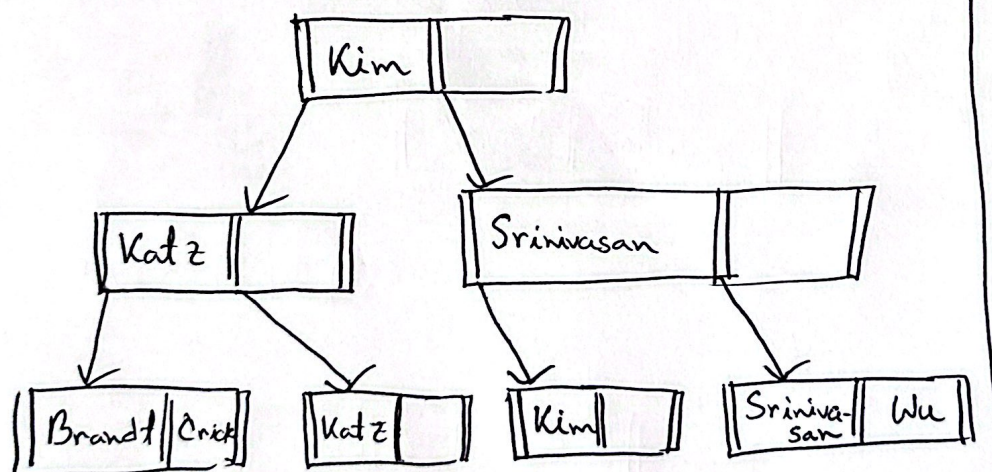
insert Brandt :



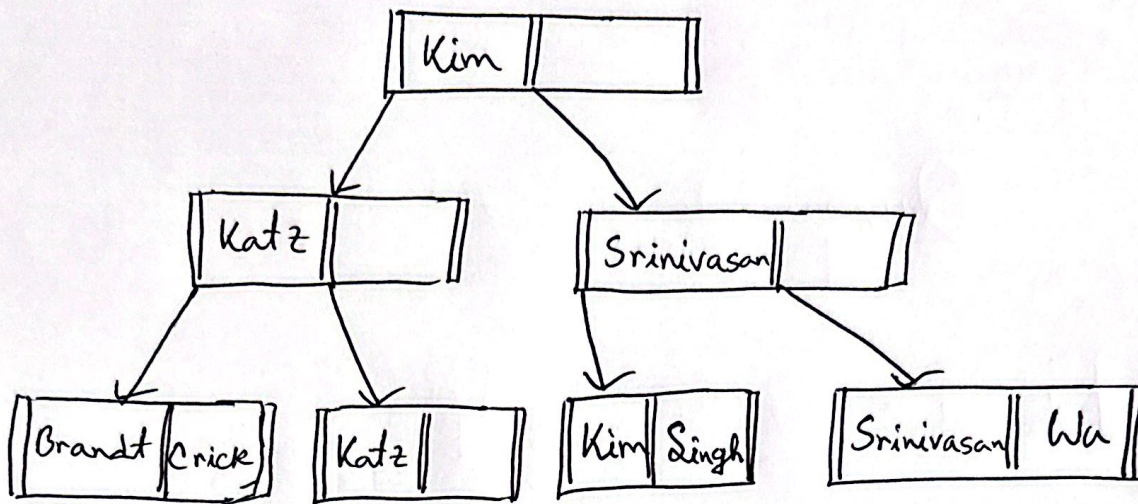
insert Kim :



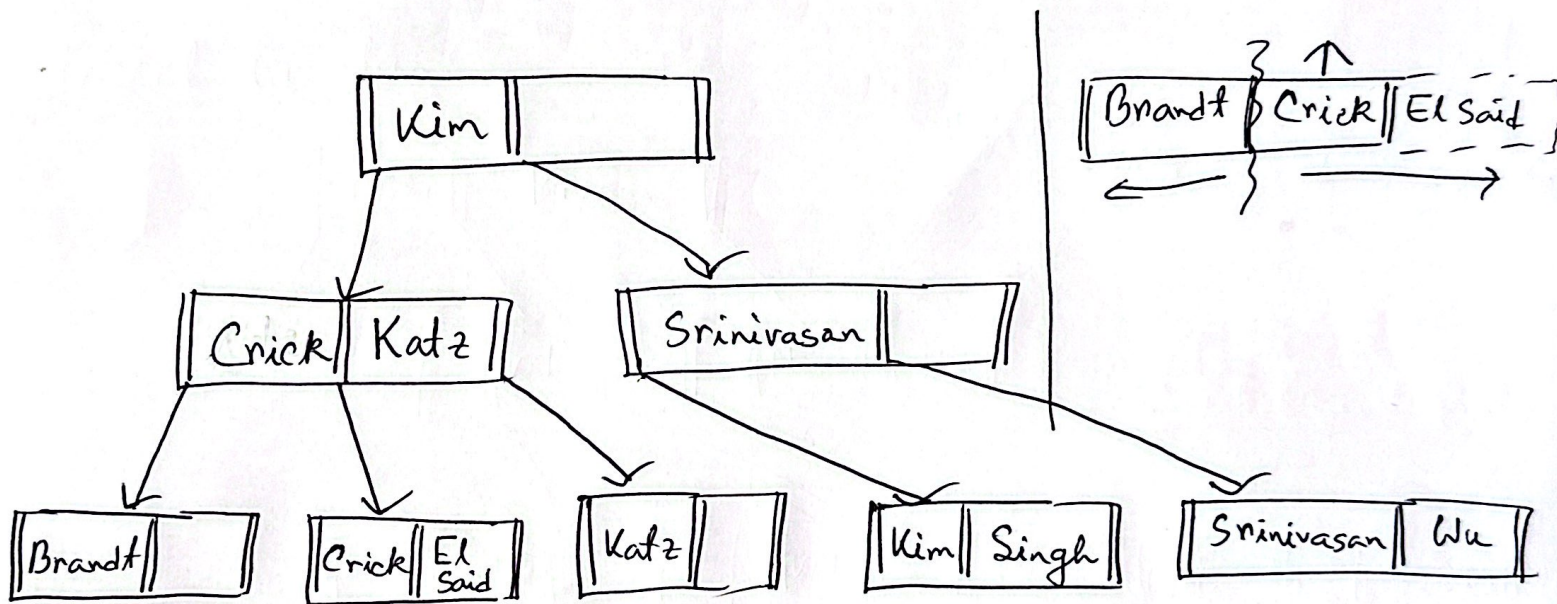
Insert Wu :



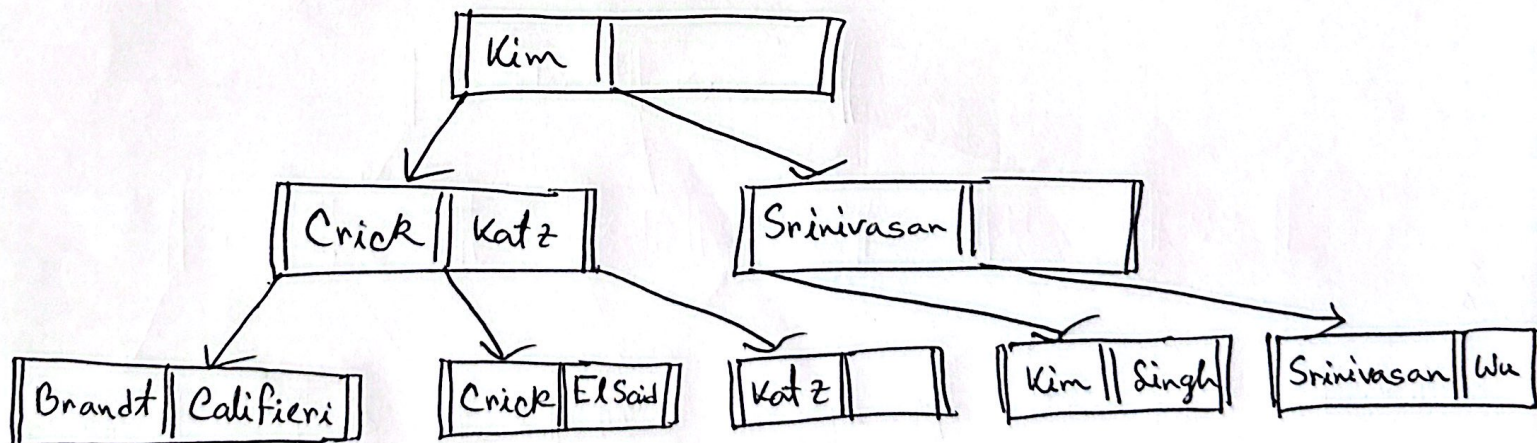
Insert Singh :



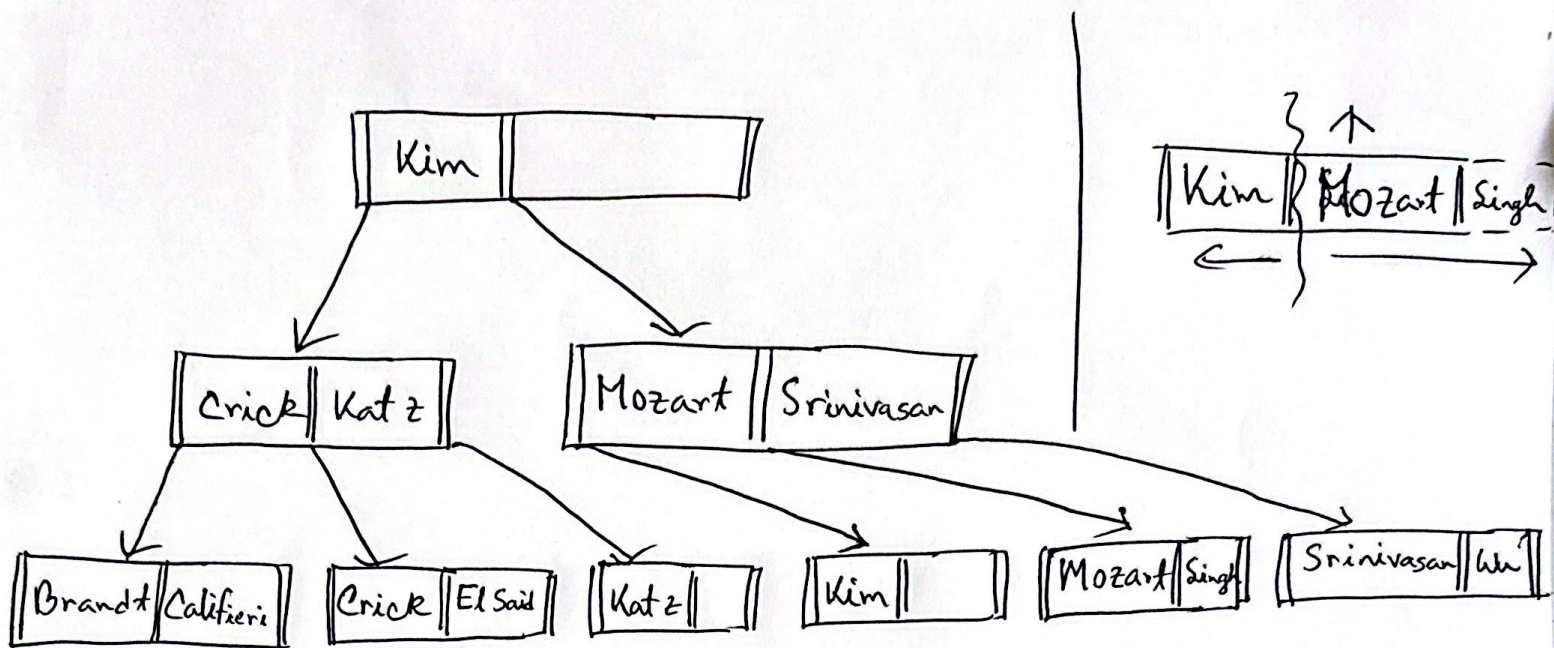
insert El Said :



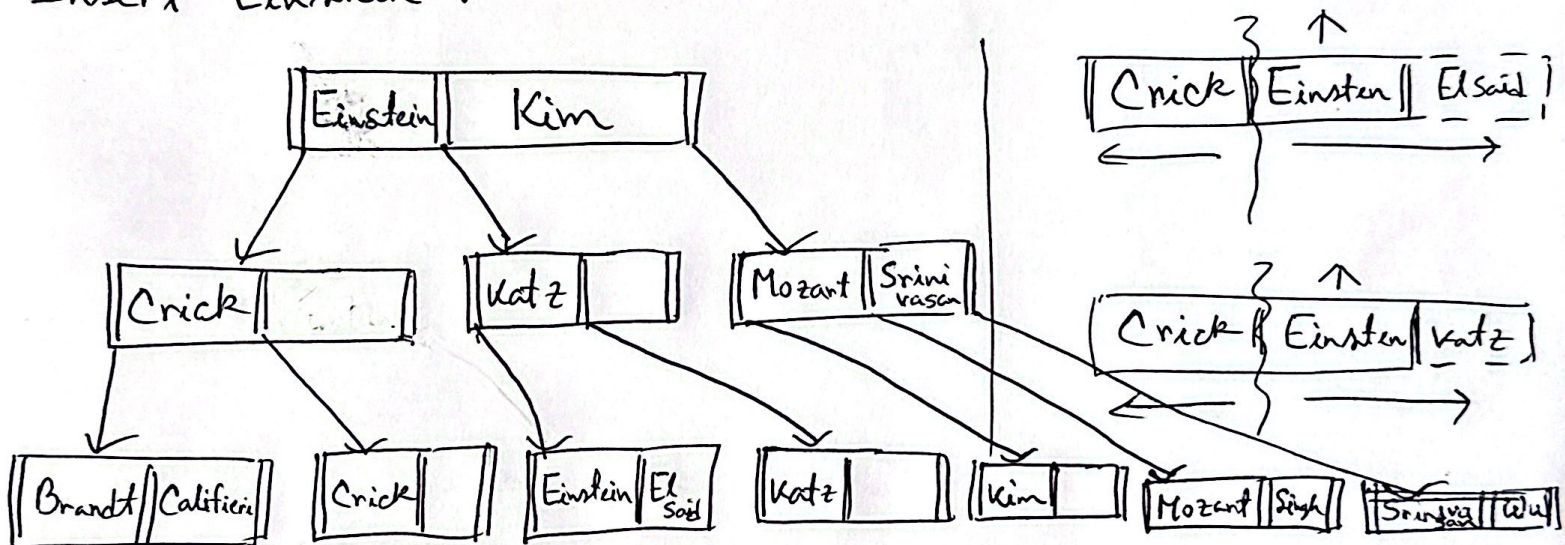
insert Califieri :



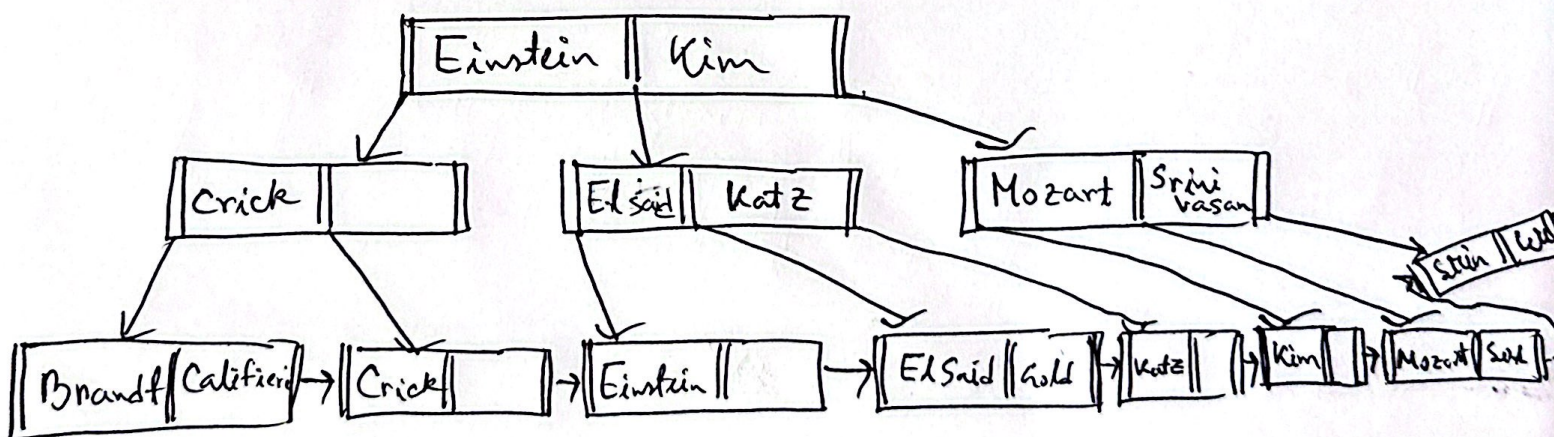
Insert Mozart :



Insert Einstein :

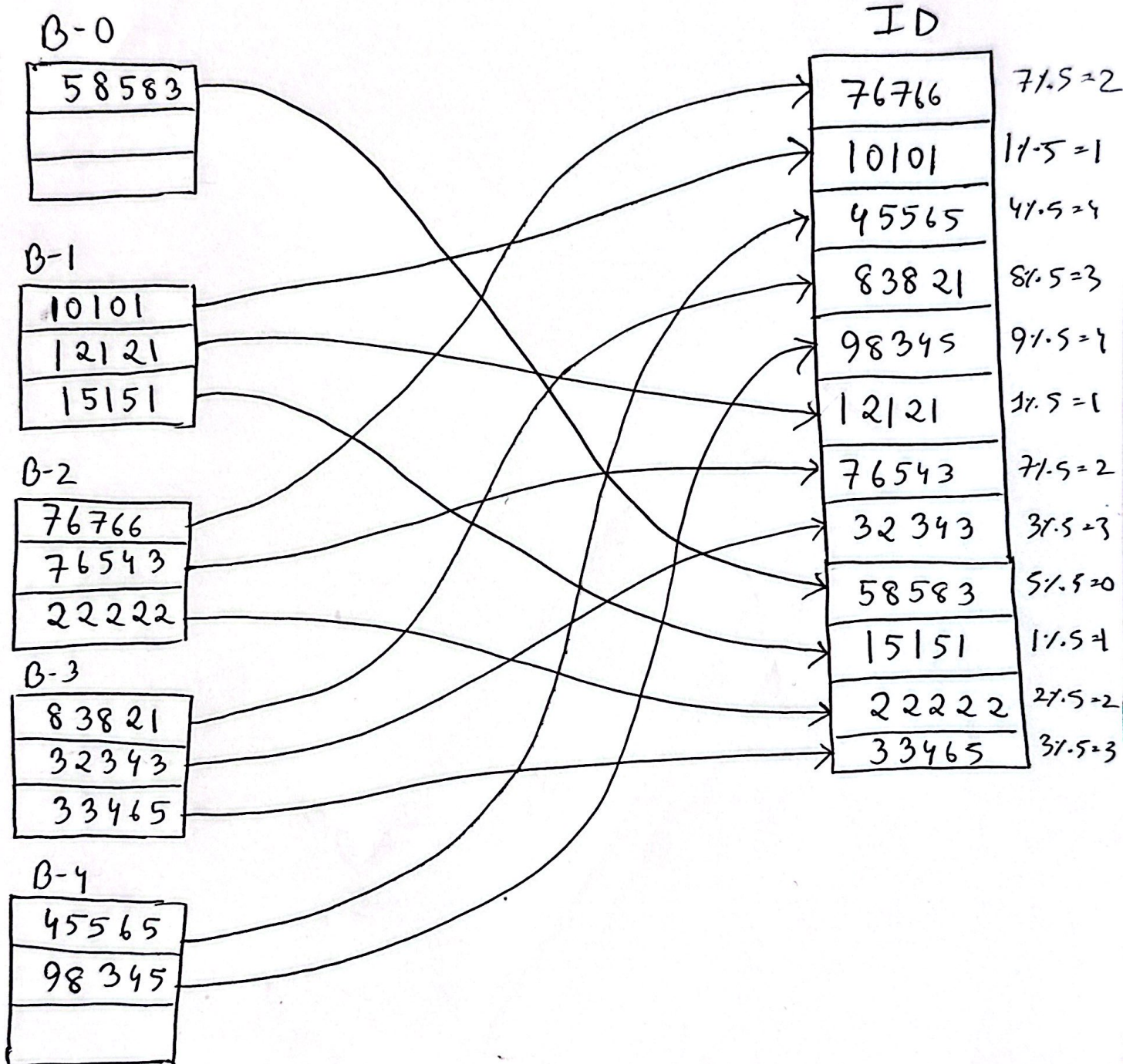


Insert Gold :



(2)

$$h = (\text{first digit of ID}) \% 5 \neq 5$$



Quiz - 3

Answer of Question 1

(A)

It is in 1NF because there is no composite, multivalued attributes or nested relationship in this schema.

(B)

It is not in 2NF because there is partial dependency on primary key due to FD1.

Decomposing 2NF :

Book-copy1(Book-id , Book-title, Genre, Author-id, Author-name,
Author-details)

Book-copy2(Book-id , Copy-no , Binding-type, Year, Total-page-no,
Price)

(c)

It is not in 3NF because there is transitive dependency due to FD2 and FD3.

Decomposing 3NF:

Book-Copy 1 (Book-id , Genre , Author-id , Book-title)

Author-info (Author-id , Author-name , Author-details)

Book-Copy 2 (Book-id , Copy-no , Binding-type , Year , Total-page-no)

Book-Copy 3 (Total-page-no , Binding-type , price)