

① Construct Red-black tree.

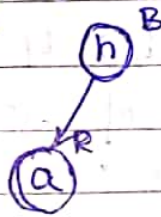
Name- Dhanraj → last 6 characters

= h, a, n, x, a, j

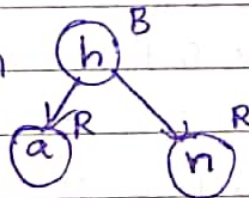
= Step 1: h is first ele



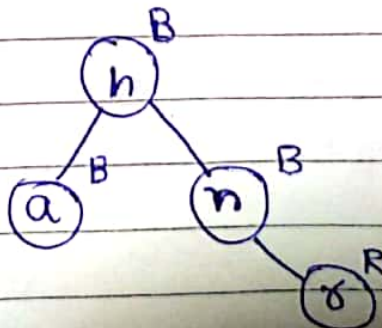
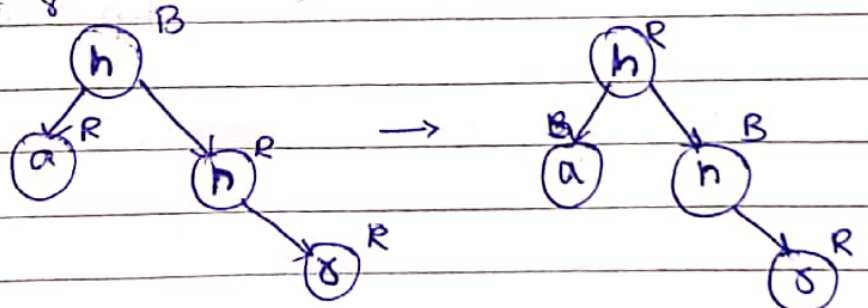
Step 2: inserting a



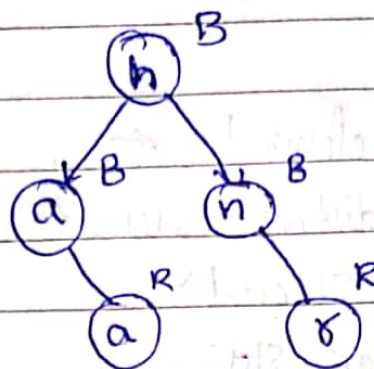
Step 3: inserting n



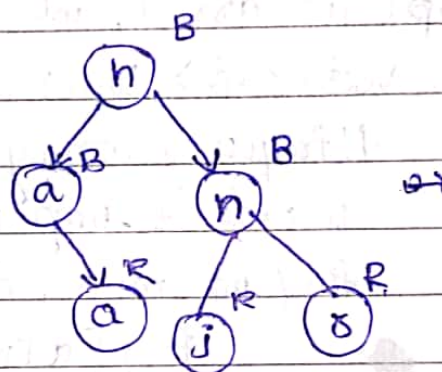
Step 4: insert x



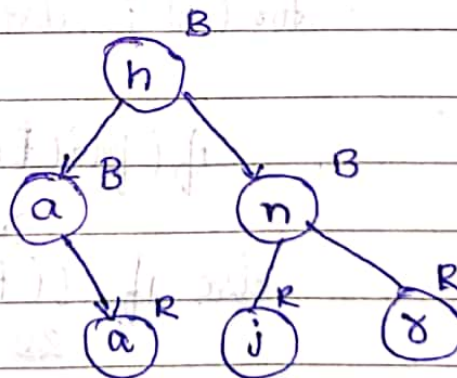
Step 5: insert a



Step 6: insert j



final Red-black - Tree



② Extendible hashing for first 7 characters
Bucket size = 2

→ d, h, a, n, r, a, j, k.

D - 4 - 00100

H - 8 - 01000

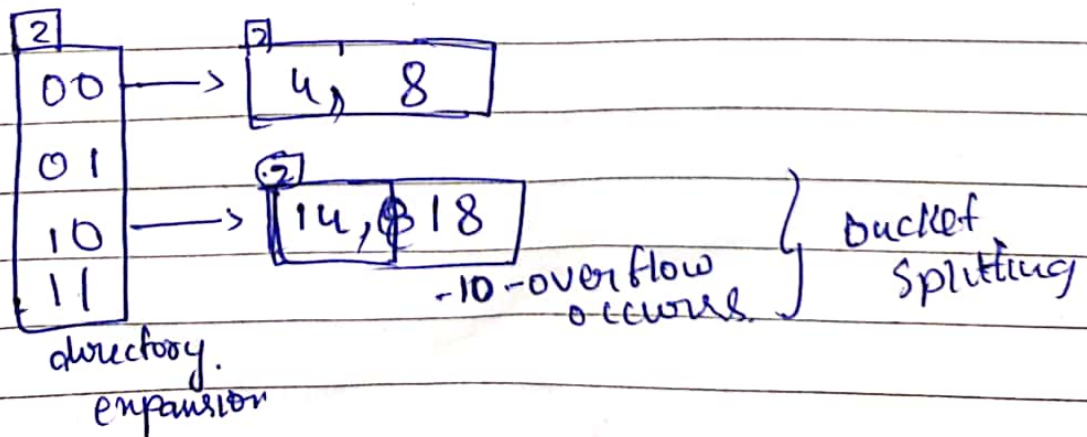
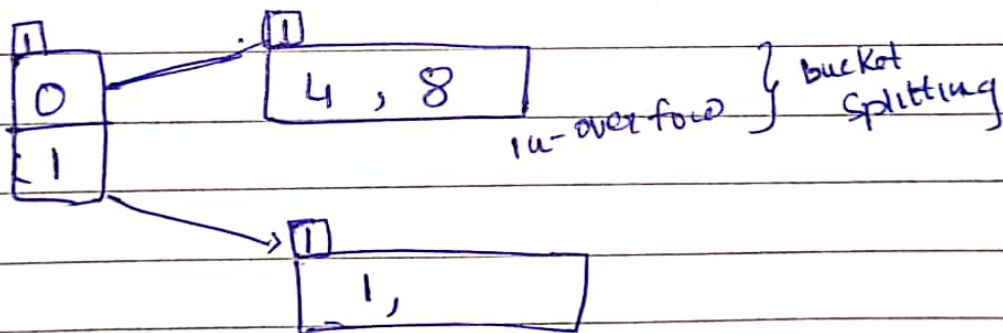
A - 1 - 00001

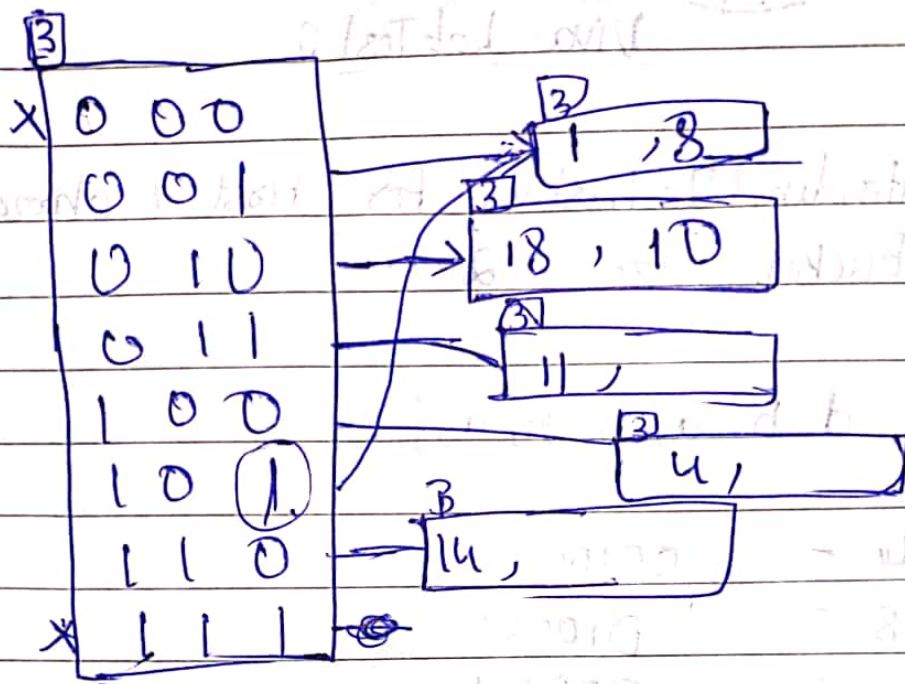
N - 14 - 01110 → 14 - overflow occurs

R - 18 - 10010

J - 10 - 01010

K - 11 - 01011





we need 3 global variable, bucket size = 2

