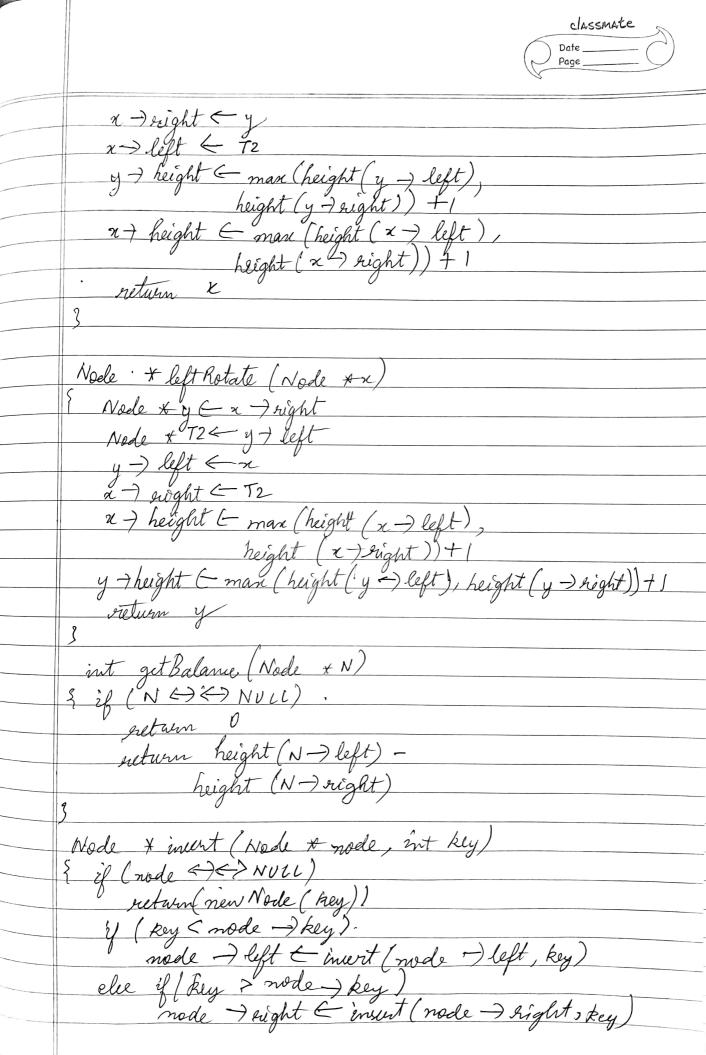
classmate PRANAV JAGADEESH IBMI8CS071 PROGRAM 4 WRITE-UP 5B BATCH -4 Elass Node public : int key Nøde \* left Nøde \* right int height int max (int a, int b) return (a>b)? a:b int height (Node · \*N)

? if (Next)

return 0

return N > height Node \* new Node (int key) 1. Nøde \* nøde ← new Nøde () node -> key < key node - left < NULL node - right < NULL node → height <- 1 return (node) Node \* right Rotate (Node \* y) Node x x ← y → left Node y T2 ← x → right



else relain node mode -) height ( 1 + max (height ( node -) left) height ( node - ) right )) int balance ( node) if (balance > ESS key & made -> left -) key) if (balance <-188 key > node -) right I key) netwn left Retate (node) if (balance > 1 && key > node -) left -> key) E node -) left < left kotate (node -) left) 3 return "right Refate (node) if Sbalance < - 1 & bey < node - ) eight - bey)

2 node - ) right & right Rotate (node -> right). retain left Rotate (node) rettien node Node \* min Value Node (Node \* node) Wode of current & node while (eurorent -) left ( NULC) werent & wrount & left return Carrient Node \* delete Node (Node \* nost sint key) { if ( noot <) <>> NULL) return root if (key < root -) key) root -) left < deleteNode (root -) left, key) else if (key 7 host -> key) root - right = delete Node ( root - right key)

{ if ((root -) left (> <> NULL) | ( loot -) night (> <> NULL) )

? Node \*temp (-) root -> left ? Sect - right if (temp () C) NULL) temp & hoot host - NUCL \* root Extemp free (temp): Node \* temp & min Value Node ( root -) right root -) Rey & Temp -) Rey root -) right & delete Node ( root -) right, temp key) if ( next <> => NVLL) juset -) height (- 1 + max (height (host -) left))

height (root -) right)) int bolance & get Balance (Rest) if balance >1 & get Balance (root =) left) >=0) ultum right Rotate (host) "It balance > 1 ll get balance (noot -) left < 0)
noot -) left = left Motale (noot = left)
return right Rotate (noot)

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