Page No. Sumanth-KV 1BM1865112 Batch-6 Strict and avid int data; strict al \*P struct avl \*x; typedef strict avl \* ax AVL; AVL W= NULL) int height (avt x) int difinheight (AVL); ANT ANTOR (BAN); AVL KLYOT (AVL) AVL 2V-N+ (AVL); AVL YL-Not (AVL); AVL balance (AVL) AVL insert (AVL, int); viorvoid inorder (AVL) int avitree: height (AVI) node) L int hei= 0 if (node] = NULL) int L-h= heigh + (node ind r-h- height (node -> r); return max (l-h, r-h) +1; () Sumanth-KV

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|--|--|
|  | AVL avl-tree: + l-not (AVL par) 1  |
| and the same of th | AVI childs   |
| and the same of  | child= par->r;   |
|  | par-sv= ll-not (Child);  |
| and the same of th | vehrn ry-not (par);  |
| and the second   | 1  |
| partie and the same  | 9  |
| in the same of the | AVI avi-tree: balance (AVI node)   |
| and the same of th | int batfac = difinheight (node);   |
| Salar and Andrews  | if (bal-fac>1)2  |
| -  | if Caiffeen  |
| -  |  |
|  | if (difinheight (node-sl)>0)   |
| -  | node = ll-vot (node);  |
|  | 01:0   |
|  | node = lr-rot (node);  |
|  |  |
| u m constituto de la constitución de la constitució | else if (bal-fac x-1) {  |
| di Liurianian  | else if (bal-fac 1)>0)   |
|  | else if (bal-fac (node-or) >0)  If (difinheigh+ (node-or) >0)  node = rl-rot(node) |
| Control of the Control   |  |
| Non-Maria Maria  | else<br>hode = rr-rot (node)   |
| N. CORRECTION OF   | 7  |
| The same of the sa | return node;   |
| The state of the state of  | 7 Yeturi nam   |
| and the same of th | 3  |
| The same of the sa | AVL aultree: insert (AVL mode, int val)?   |
|  | if (node == NUL)   |
| Constitution of the last   | node - (AVI) malloc (size of (avis)  |
| and the second   | nour action at   |
| THE REAL PROPERTY.   | node → l= NULL   |
| -  | nadent = NULL;   |
|  | return node,   |
|  | Come Con Mr. No.   |

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return insert (node > l, val): if (val > node > data) return insert (node > v, val.) void avl-tree: inorder (AVL root) if (root 1 = NULL) inorder (voot > 1); (at K robl-) data; in order ( roots r) 4) Syman th. Kr

|         | Page No.                                  |
|---------|---|
|         | AVI Ket avi tur                           |
|         | AVL temp; remove (int x, AVL node) (      |
|         | if (mode == NULL)                         |
|         | return NULL                               |
|         | all lay Achiev I James I                  |
|         | else if (x < node > data)                 |
|         | The care data)                            |
|         | node > last = remove (x, node >1);        |
|         | else if (x> node > data)                  |
|         | node > v = remove (x, node > v);          |
|         | ( I note of                               |
|         | else if (node > l Rt node > r)            |
|         | temp=node->r;                             |
|         | while (temp > 161 - WLL)                  |
|         | Jemp-Jemp-)2;                             |
|         | 7 12 34 10000 5 (13)                      |
|         | node → data = temp → data                 |
|         | hode > rest = remove (node > data.        |
| 1       | The IVA Edail rooms ( soul rood soul)     |
|         | ignal Wa                                  |
|         | else d                                    |
|         | temp = node;                              |
|         | if ( node -> P == NVLL)                   |
|         | node = node -> r)                         |
|         | else if (node > r == NULL)                |
| ·(L)    | node = node > l;                          |
|         | delete temp                               |
|         | 1 (ptobs-done = 1) 11 pl                  |
| Eller . | in a short returned = to air an income    |
|         | Ff (node = - NULL)                        |
|         | return NULL;                              |
|         | Y C I VIII I                              |
|         | (C) (1) 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 |
|         | (3) Siman th. Ki                          |
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|---|
| if (height (nodes) - height (nodesr) == 2)                                      |
| if (height (node→l→l)-  |
| if (height (node > l -> l) - height (node > l -> r) == 1) return [1: vot (node) |
| else<br>return lxrot(node)  |
| fle if (height (node-in) - height (node->l) == 2)                               |
| if (height (noder > 5) - height (noder > 1)                                     |
| return rr-rot (node)  |
| <br>Plse  |
| 3 return rl-vot (node)  |
| 7 return node;  |
| 6 Sumanth IKU   |
|   |