```
Red Black true inevition
interest (conet int 8 doctor)
     Node *pt=nue Node (dota)
     root = BSTInsut (nost, pt) // doer a normale
   Il Now ar need to sheek if need black tree
properties care violated and fin them.
   fix violation (nost, pt)
 finviolation (Node * groot, Node
        Node * parent_pt = NULL:
        Node * grand parent - pt = NULL;
       while ((pt!=root) && (pt > color!= black) &$
                 pt sparent -> color = = RED))
           grand parent - pt = pt -> parent;

grand parent - pt = pt -> parent;
       Manual of pt is left hild of grand
      if (parent-pt = = grandparent-pt -> left)
           Node * * unell-pt = grand-pount-pt->right.
        11 can la: The unite of pt is also sud
only recoloring required
           if (uncle-pt!=NULL && uncle-pt-scold) == RED)
                grand-parent-pt > color = RED_
                 povent-pt->color = BLACK;
                unch pt -> color = BLACK;
                Pt = grand-pound-pt;
```

[ ] ( care 16: pt is right child of its poont left notation or original. if (p = = part-pt -> sight) notate Lift (noot, pount pt); part-pt = pt-part; // care 1 c: pt is liftered of its pount right notation required. notationight (nod, grand-paint-pt); pt = har 1 . L. 7 pt = pount pt, // core 2: Posent of pt is right shild of grand Node \* unele\_pt = grant-pount - pt -> left\_ // Come da: The uncle of pt is also red only relating original. of ((uncle-pt!=NULL) && (uncle-pt-scold==RED) grand-parent-pt-> color = RED; posunt-pt -> colo) = BLACK; pa unde-pt-> cold = BLACK pt = grand-pount-pt. I care 26: pt is left child of its parent right notation required

If (pt = = parent-pt -> lyt) swetche Right (noot, pound-pt); pt = parent-pt; parent-pt = pt -> parent; I care 2c: pt is sight child of the poor, left rotation origined notate Left (noot, grand-parent-pt;);
swap (parent-pt -> color, grand-pcant-pt -> color)

pt = h resident pt = pound-pt; goot -> color = BLACK; I core sur i its more in it is one mit ground found of the souled - REDI Eximite Colon of June & you note pt - NR OLACK 15. 14 trinid - prince - 10 Town It is in infl shild of the parent