**WHW 2-1**

// initial state : root = NULL

root = Insert(root, “fish”);

return 100;

// root = 100, root->data = “fish”, root->left = NULL, root->right = NULL, root->ht = 1

root = Insert(root, “dog”);

Root->left = insert(root->left, “dog”);

return 120;

Return 100;

// root = 100, root->data = “fish”, root->left = 120, root->right = NULL, root->ht = 2

root = Insert(root, “cat”);

Root ->left = insert(root->left, “cat”);

(Root ->left) -> left = insert((Root ->left)->left, “cat”);

return 130

return 120

Root = LL(root);

Root = rotateright(root);

return 120;

return 120;

Return 120;

// root = 120, root->data = “dog”, root->left = 130, root->right = 100, root->ht = 2

root = Insert(root, “mouse”);

root ->right = insert(root->right, “mouse”);

(root ->right) -> right = insert((root ->right) ->right, “mouse”);

Return 140;

Return 100;

Return 120;

// root = 120, root->data = “dog”, root->left = 130, root->right = 100, root->ht = 3

root = Insert(root, “lion”);

root ->right = insert(root->right, “lion”);

(root ->right) -> right = insert((root ->right) ->right, “lion”);

((root ->right) -> right) ->left = insert(((root ->right) -> right) ->left, “lion”);

Return 150;

Return 140;

Return 100;

(root ->right) = RL((root ->right));

(root ->right)->right = rotateright((root ->right)->right);

Return 150;

(root ->right) = rotateleft((root ->right));

Return 150;

Return 150;

Return 120;

// root = 120, root->data = “dog”, root->left = 130, root->right = 150, root->ht = 3

**WHW 2-2**













