**PINNACLE 2022 TRAINING**

**DATA STRUCTURES**

**ASSIGNMENT-3**

**NAME:**  VASANTA VANAN R

**ROLL NO:** 201801158

1.Write an algorithm or develop a code to find the number of universal value sub-trees.

**PROGRAM (PYTHON):**

class Node:

def \_\_init\_\_(self, data):

self.data = data

self.left = None

self.right = None

def counts(root, count):

if root is None:

return True

left = counts(root.left, count)

right = counts(root.right, count)

if left == False or right == False:

return False

if root.left and root.data != root.left.data:

return False

if root.right and root.data != root.right.data:

return False

count[0] += 1

return True

def countofunival(root):

count = [0]

counts(root, count)

return count[0]

root = Node(1)

root.left = Node(2)

root.right = Node(3)

root.left.left = Node(2)

root.left.right = Node(2)

root.right.right = Node(3)

print("The total number of unival subtrees are:",countofunival(root))

**OUTPUT:**

