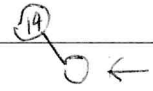


Tutorial 1)

Q1 For BST input requirement must be sorted.

1. compare 22 with middle value 14 → Right of
2. compare 22 with 25 → Left of
3. compare 22 with 19 →
4. 22 compare with 22 ✓



BS: 4 comparison

LS: 11 comparison.

Q2 BS (A, i, j, key)



if $i > j$ return -1

$$k = \left\lfloor \frac{i+j}{2} \right\rfloor$$

if $A[k] == \text{key}$ return k

else if $\text{key} < A[k]$

return BS (A, i, k-1, key)

else

return BS (A, k+1, j, key)

id	i	id	od	n=7	degree (adj)
1 →		2	0		$n = \text{adj} \cdot \text{last}$
2 →		2	1		for $i=1$ to n
3 →		1	1		$\text{id}[i] = 0$
4 →		0	1		$\text{od}[i] = 0$
5 →		1	0		for $i=1$ to n
6 →		0	2		$\text{ref} = \text{adj}[i]$
7 →		1	2		while ($\text{ref} \neq \text{null}$)
					$\text{od}[i] = \text{od}[i] + 1$
					$\text{id}[\text{ref.data}] = \text{id}[\text{ref.data}] + 1$
					$\text{ref} = \text{ref.next}$