

Date: / /

object:

Ch 4.4

item:- the member we're trying to find

Base case is if $(Low > high)$ so when we can't find the element the function ends

Recursive case if $(middle > item)$ then we recall the function with a new

$$high = mid - 1$$

if $(middle < item)$ then we recall the function with a new
 $low = mid + 1$

if $(middle == item)$
→ and the function

4.5) $O(n)$

$n \Rightarrow$ number of operations

4.6) $O(n)$

4.7) $O(1)$

4.8)

2	3	7	8	10
3				
7				
8				
10				

Two at

$= O(n) \times O(n)$

$= O(n^2)$

~~Two at~~
Two at

Two at

Two at

Two at

Two at

Two at

Ch 5

notes :-

① let's call it a slot \Rightarrow each slot inside array has Index \Rightarrow

1 - Key	2 - Value
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② For each Key, a different Value unique to it must be assigned

③ no Repeating Values

Exercises

5.1 not consistent because (1) is the same Value for everything and in hash tables they must have different Values

5.2 not consistent because Random numbers have a chance to be repeated

5.3 consistent no chance of being repeated

5.4 not consistent constant Value

5.5 C

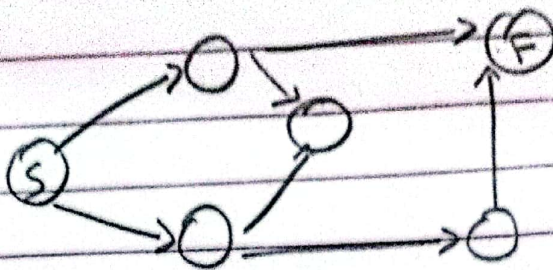
5.6 B

5.7 D

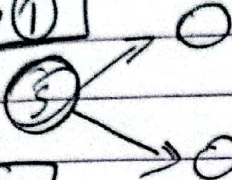
Date: / /

ch 6

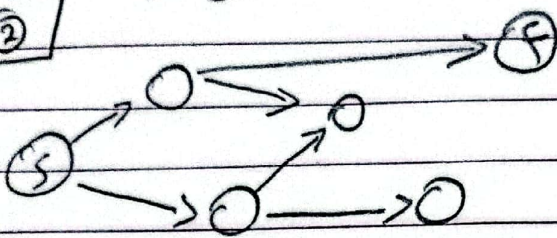
6.1



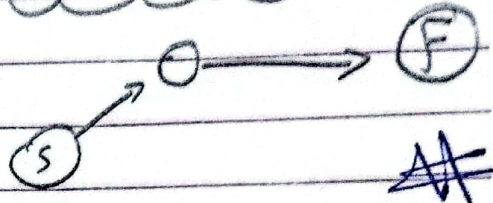
Step ①



Step ②

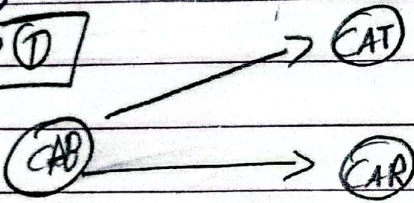


Shortest Route

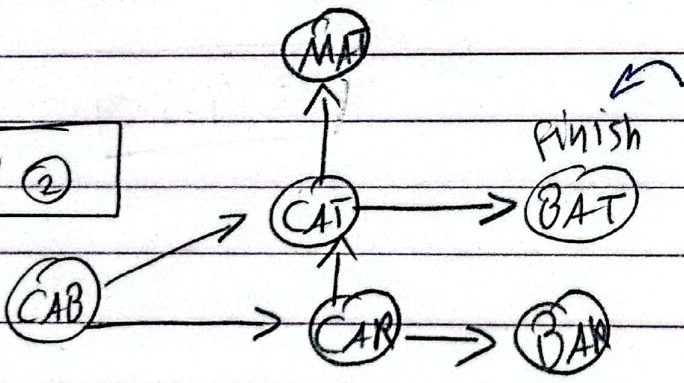


6.2

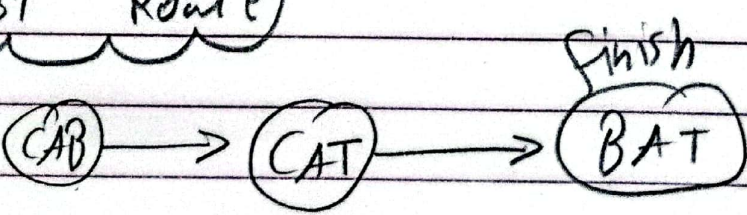
Step ①



Step ②



Shortest Route



6.3

A, Invalid

B, Valid

C, Invalid

6.4

1. wake up

2. EXCursise

3. Shower

4. Got dressed

5. Pack lunch

6. Brush teeth

7. Eat Breakfast

6.5

A, C

A Tree: - no Edges Ever point Back