Name: Anindita Rakwool
RollNo:-42

Q7. Create a B-tree of order 5 by inserting the following elements.

3, 14, 7, 1, 8, 5, 11, 17, 13, 6, 23, 12, 20, 26, 4, 16, 18, 24, 25, 19.

Ans m = 5

max child = 5

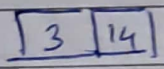
max key = (5 - 1) = 4

min child = $\lceil \frac{5}{2} \rceil = 3$

min key = $\lceil \frac{5}{2} \rceil - 1 = 3 - 1 = 2$

insert 3

insert 14



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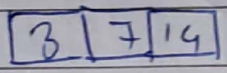

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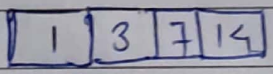

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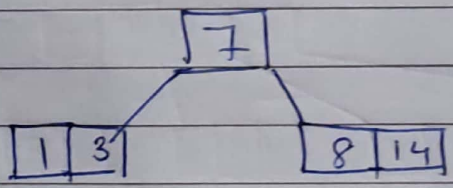

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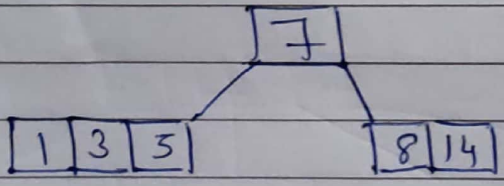

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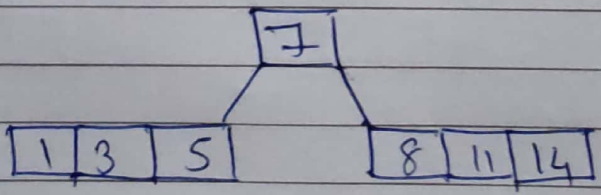

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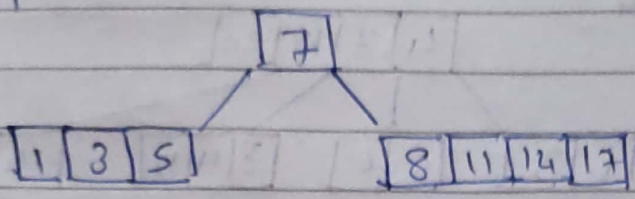

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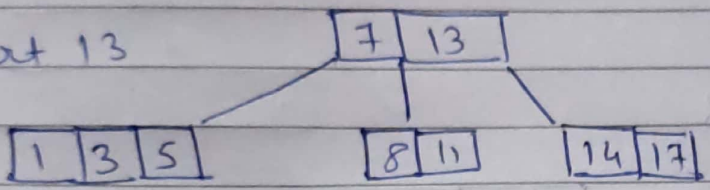

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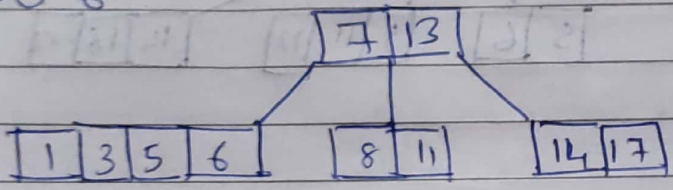

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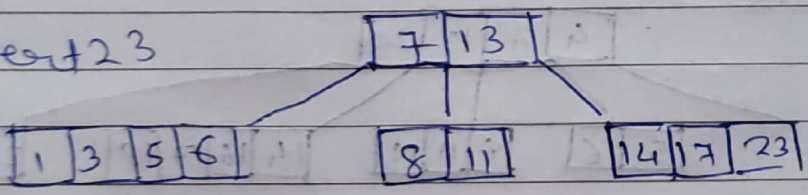

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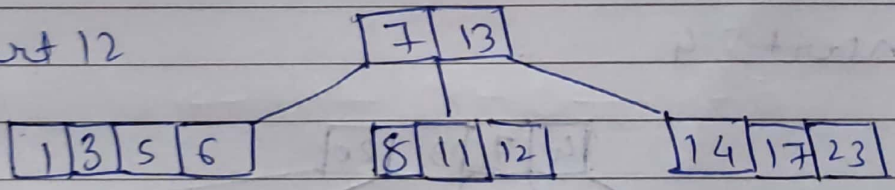

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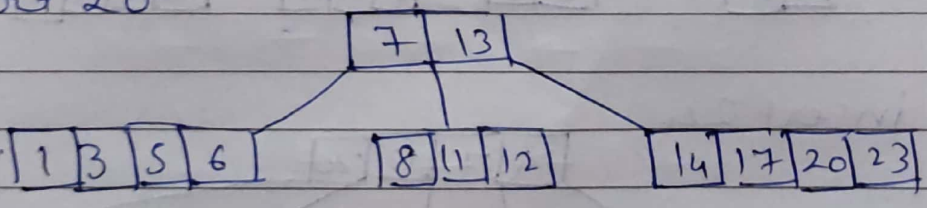

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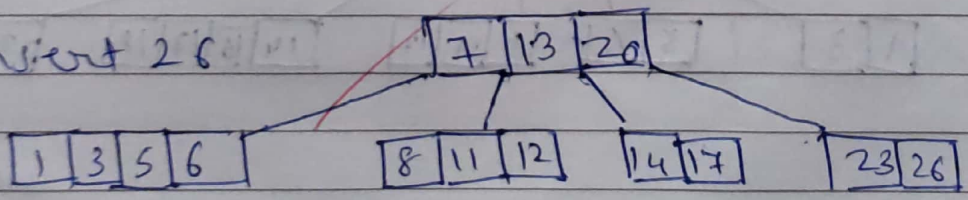

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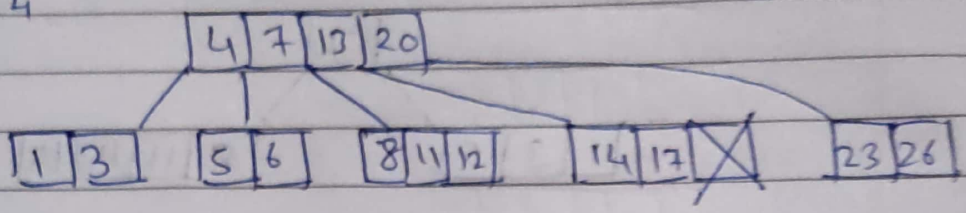

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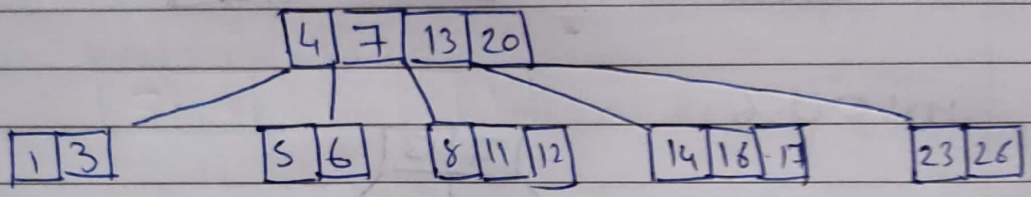

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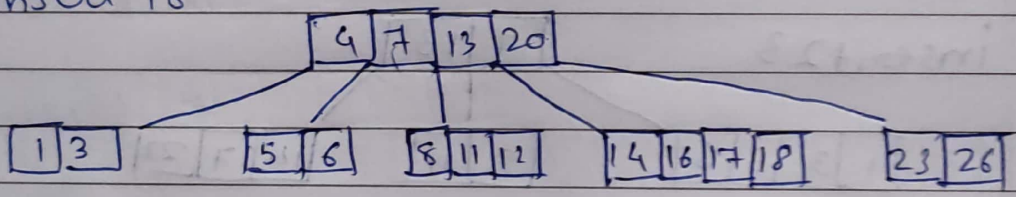

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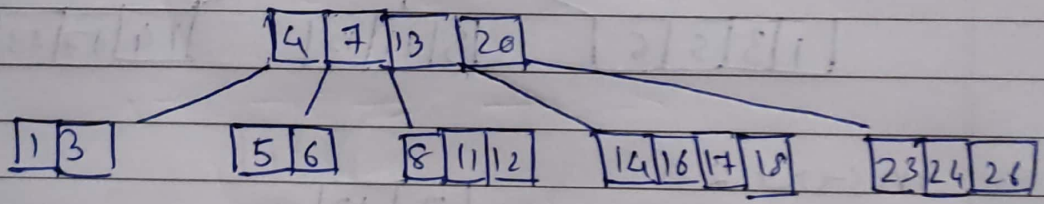

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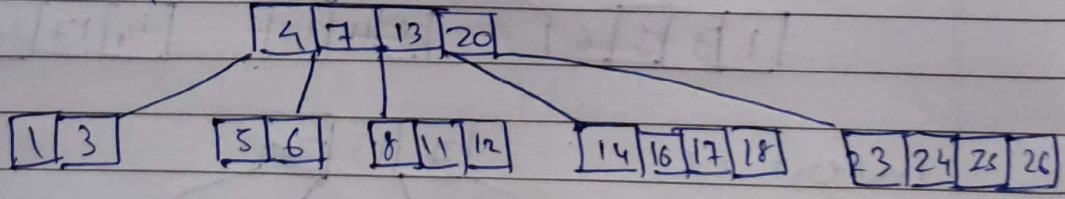

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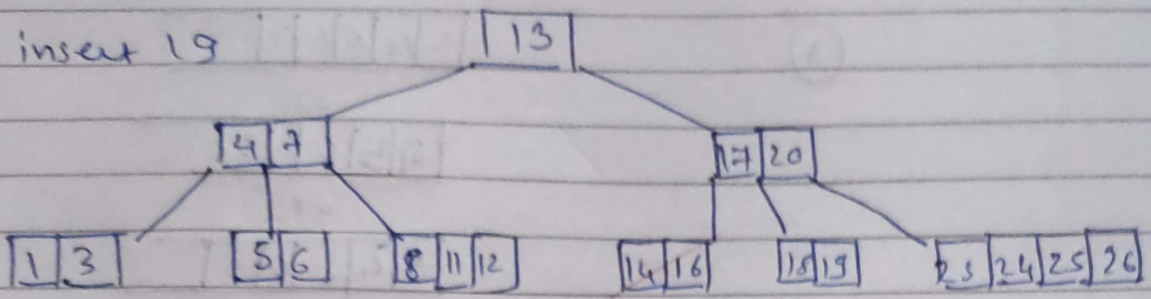
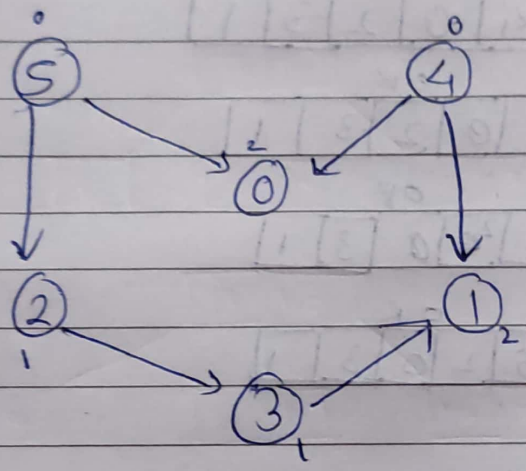
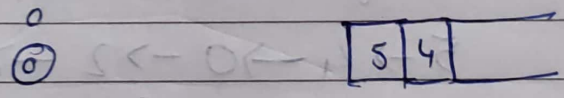


Q2 Solve using Topology sorting





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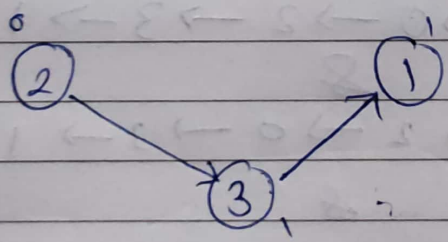

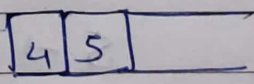

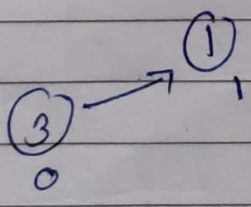

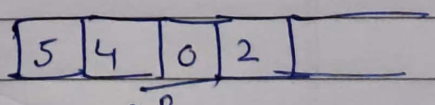

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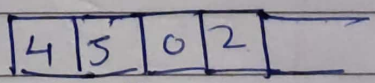

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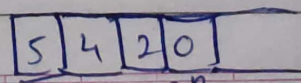

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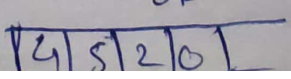

Page No.
Date

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or

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or

5	4	2	0	3

or

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5	4	0	2	3	1

or

4	5	0	2	3	1

or

5	4	3	0	3	1

or

4	5	2	0	3	1

∴ Topologies :-

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&

$4 \to 5 \to 0 \to 2 \to 3 \to 1$

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$4 \to 5 \to 2 \to 0 \to 3 \to 1$