



B-Tree

- Every node must have $\lceil \frac{m}{2} \rceil$ child nodes before creating the next new node.
- Creating new node when # of child nodes is at least $\lceil \frac{m}{2} \rceil$.

2. Root can have minimal 2 child nodes.

3. All leaf nodes must be same level.

4. Creation process is bottom up.

↳ always start with one root.

Example: B-Trees, $m=4$

insert 10

insert 20

insert 40

insert 50

insert 60

insert 70

insert 80

insert 35

insert 5

insert 30

insert 65

insert 75

insert 85

insert 90

insert 95

insert 100

insert 110

insert 120

insert 130

insert 140

insert 150

insert 160

insert 170

insert 180

insert 190

insert 200

insert 210

insert 220

insert 230

insert 240

insert 250

insert 260

insert 270

insert 280

insert 290

insert 300

insert 310

insert 320

insert 330

insert 340

insert 350

insert 360

insert 370

insert 380

insert 390

insert 400

insert 410

insert 420

insert 430

insert 440

insert 450

insert 460

insert 470

insert 480

insert 490

insert 500

insert 510

insert 520

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insert 540

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insert 700

insert 710

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insert 760

insert 770

insert 780

insert 790

insert 800

insert 810

insert 820

insert 830

insert 840

insert 850

insert 860

insert 870

insert 880

insert 890

insert 900

insert 910

insert 920

insert 930

insert 940

insert 950

insert 960

insert 970

insert 980

insert 990

insert 1000

insert 1010

insert 1020

insert 1030

insert 1040

insert 1050

insert 1060

insert 1070

insert 1080

insert 1090

insert 1100

insert 1110

insert 1120

insert 1130

insert 1140

insert 1150

insert 1160

insert 1170

insert 1180

insert 1190

insert 1200

insert 1210

insert 1220

insert 1230

insert 1240

insert 1250

insert 1260

insert 1270

insert 1280

insert 1290

insert 1300

insert 1310

insert 1320

insert 1330

insert 1340

insert 1350

insert 1360

insert 1370

insert 1380

insert 1390

insert 1400

insert 1410

insert 1420

insert 1430

insert 1440

insert 1450

insert 1460

insert 1470

insert 1480

insert 1490

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