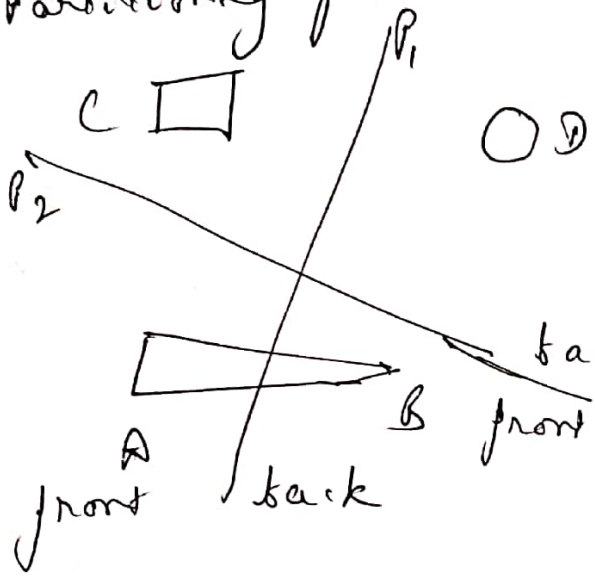
Binary Space Partitioning Tree (BSP)

left Right

3D —

= Object viewing direction is changed but object is fixed.

Partitioning planes are used to partition.



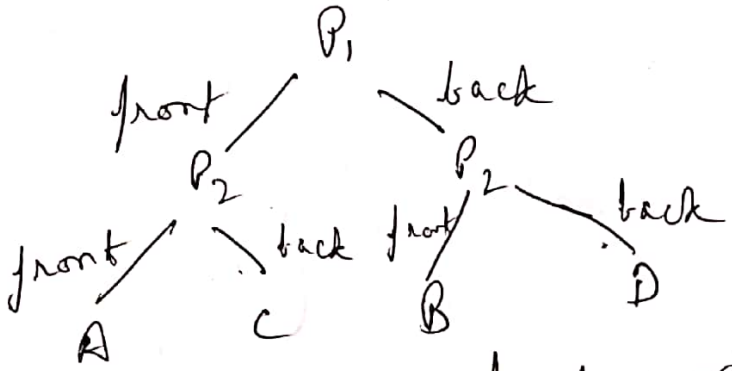
P1 — A & C front, B & D back

P2 — A & B front, C & D back

Binary Tree —

left edge — Front

Right — Back



Scan Convert back node first then front nodes

Disadd. — Speed is required to process

Fractals —

— Smooth & Regular Surface — Equations

How to represent irregular shape & size?

Mountains, Ocean Waves, Trees etc —

Coast line from certain Distance

Clear View

More clear view

We see

Self Similarity property — If we zoom, same structure over & over

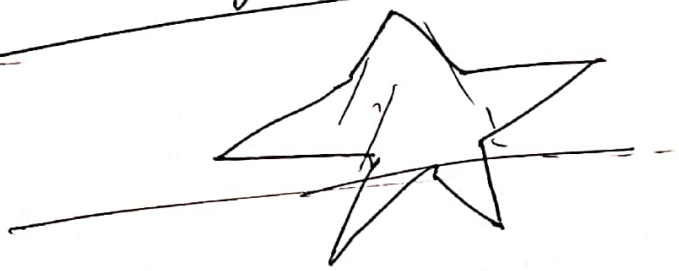
fractal dimension — $D_f = \frac{\log N}{\log S}$

Scaled object by 'S' & create N of scaled objects

No. of times

Koch Curve —

Line Segments —



NURBS —