

2-22-2000 (1)

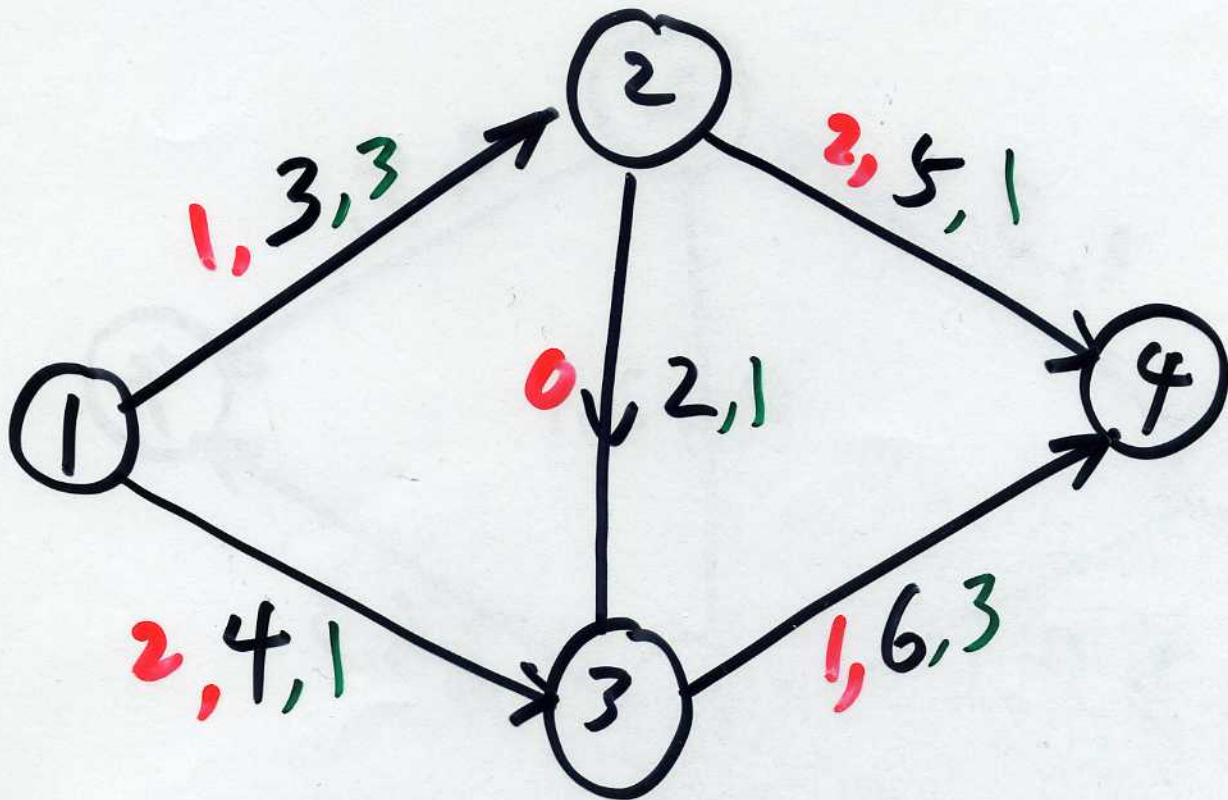
P.E.R.T.

A project consists of a set of partially ordered jobs

a job has lower bound of time
Normal completion time.

\$ dollars needed to
shorten the job by one unit

PERT



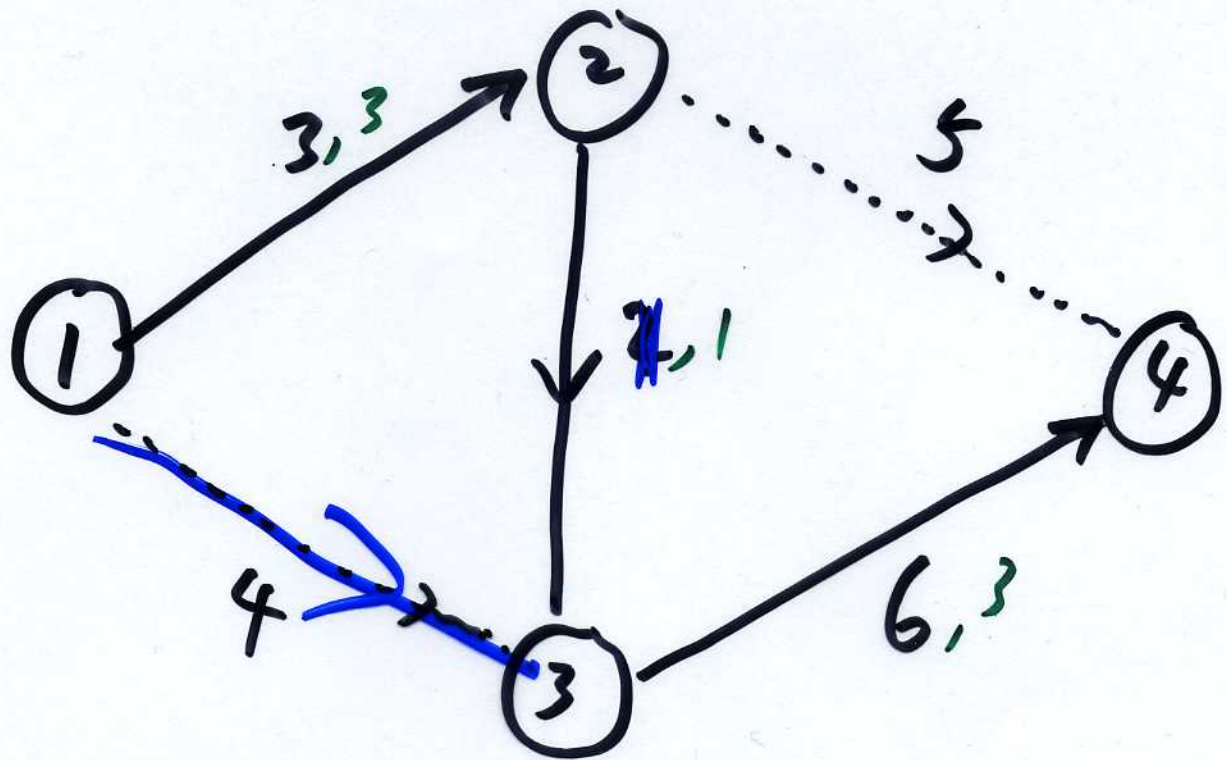
Each Job has three No.

absolute min time **Red**

normal completion time, Black

$\$ C_{ij}$ per unit cost of shortening
the arc

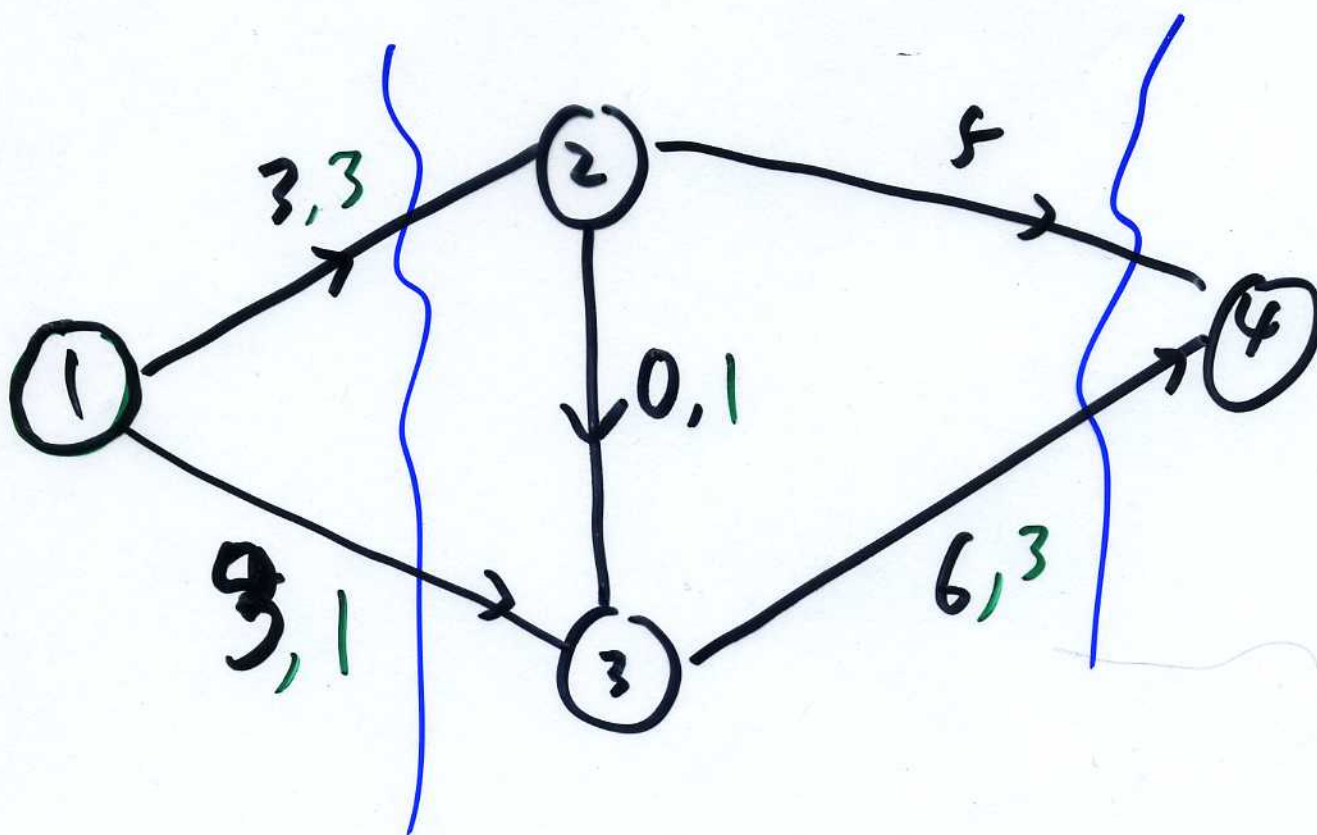
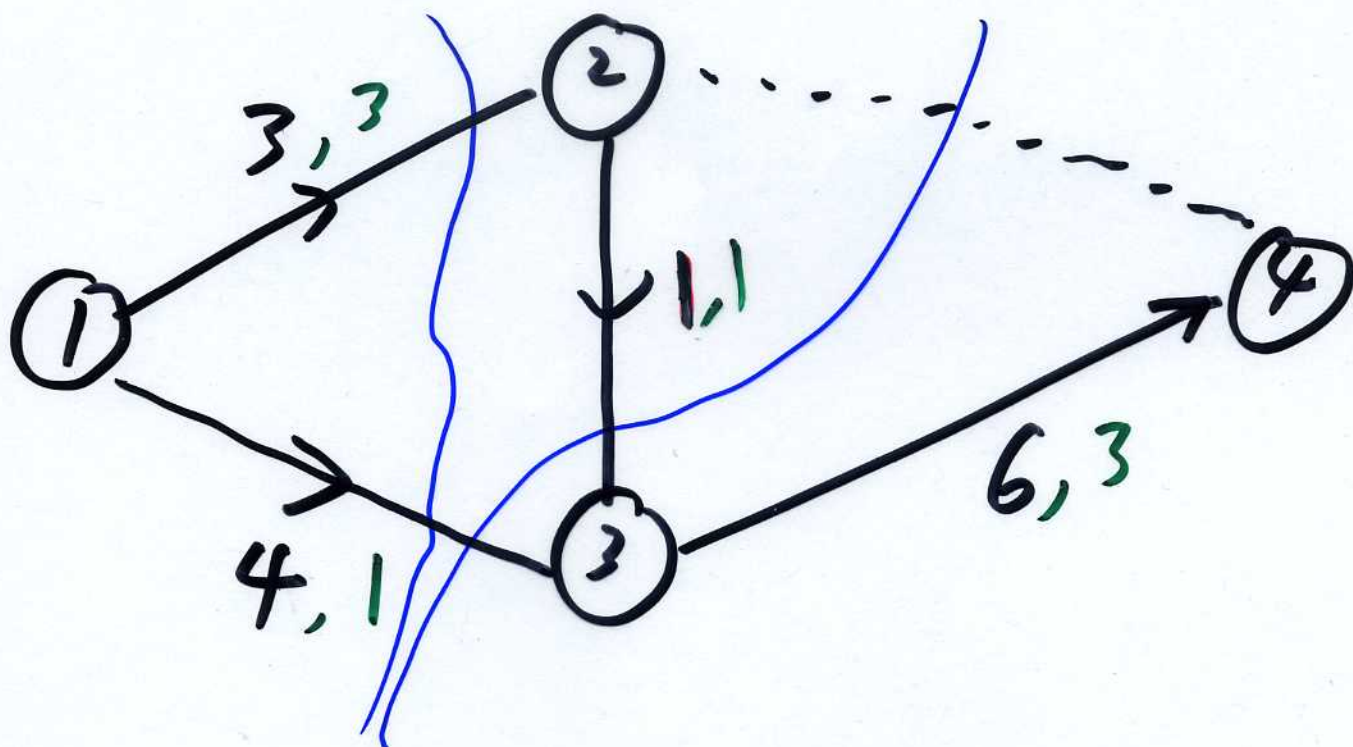
The longest path from ① to ④

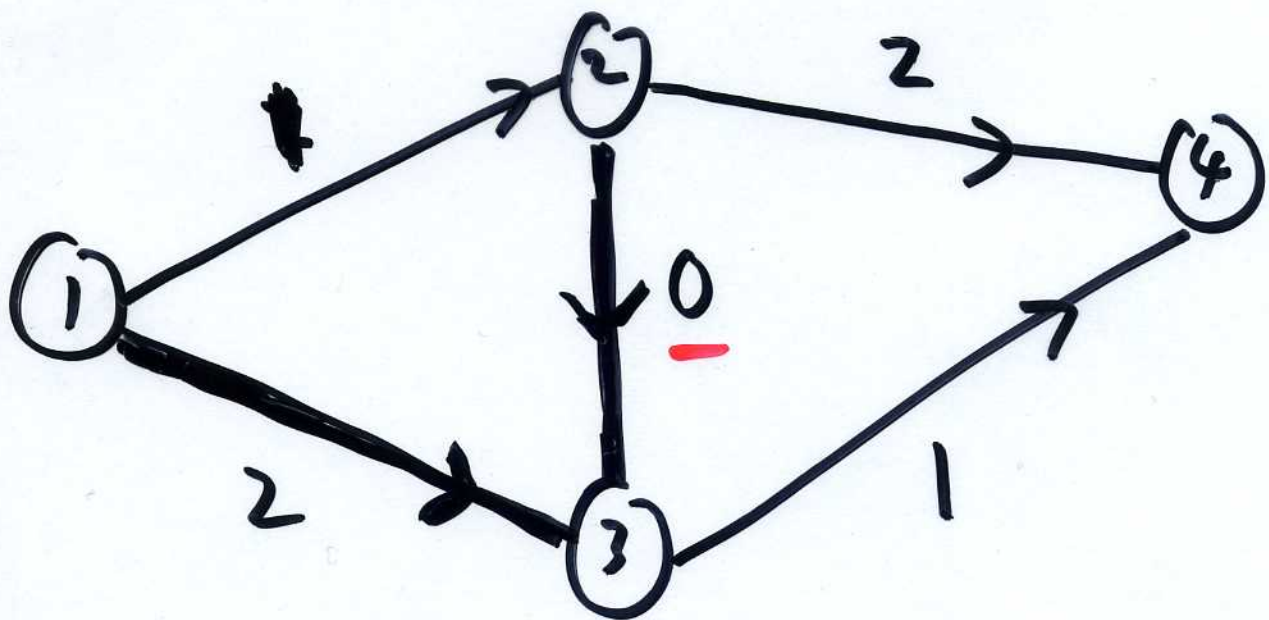
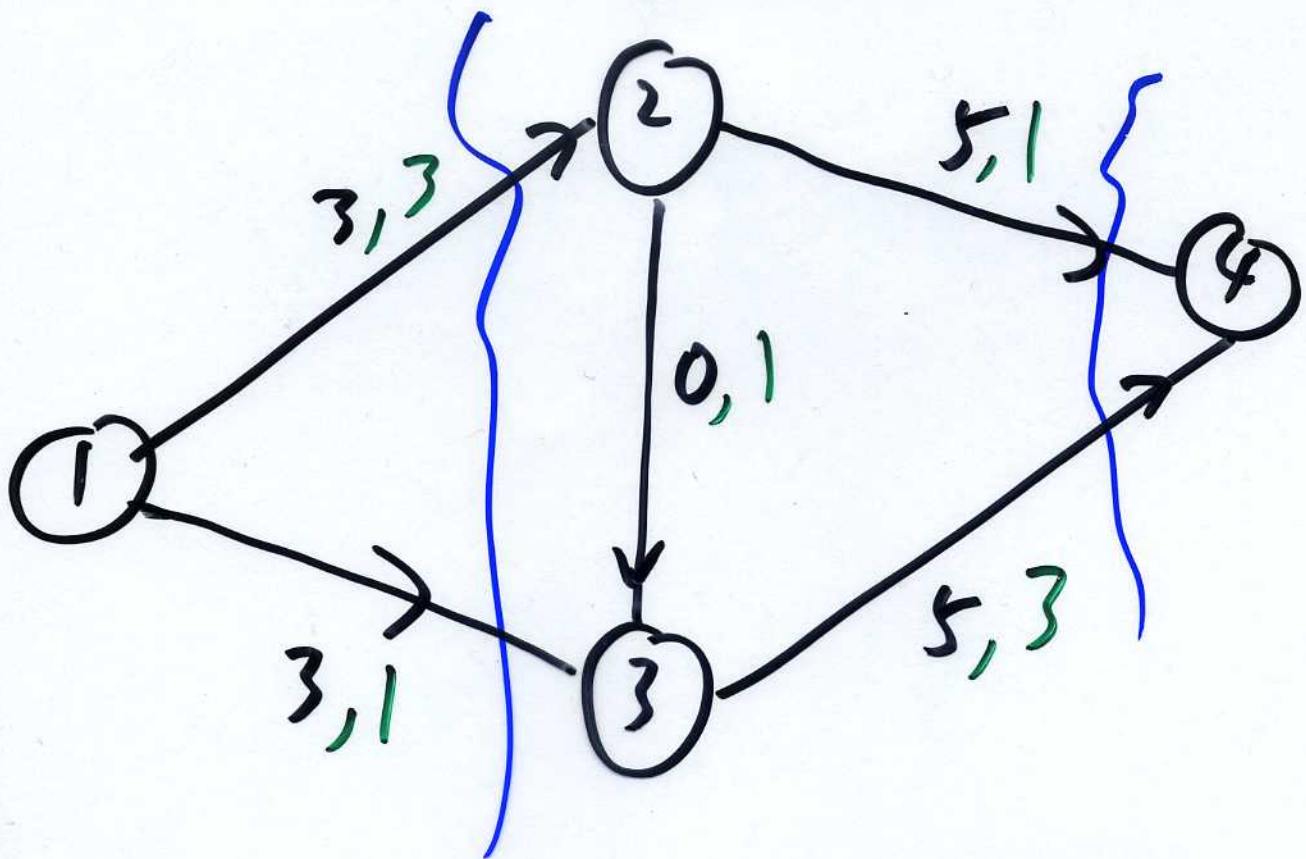


We shall spend \$Money on the best arc in the critical path

namely  until

- (i) The arc is shortened to min
- (ii) The path is no longer critical





① Based on arc lengths

find all longest paths

from (S) to (T)

Those are active arcs.

If an arc is shortened
to min, then it is a rigid arc

② Consider C_{ij} of active arcs
as Capacities of arcs

Find Min Cuts separating (S) & (T)

rigid arc has capacity ∞

Find the distance from V_s
to every node.

If an active arc has length
shorter than the difference
of distance of its two nodes
then we can increase its length
& reduce costs

