Task ID	Activity	Predecessor	Duration (months)	Budget (k$)	Progress	AC
1	Preparation	-	2	600	100%	600
2	Design	1	3	1200	100%	1400
3	Implementation	2	2	400	50%	200
4	Testing	2	3	1200	33.3%	500
5	Deployment	4	3	300	0%	0
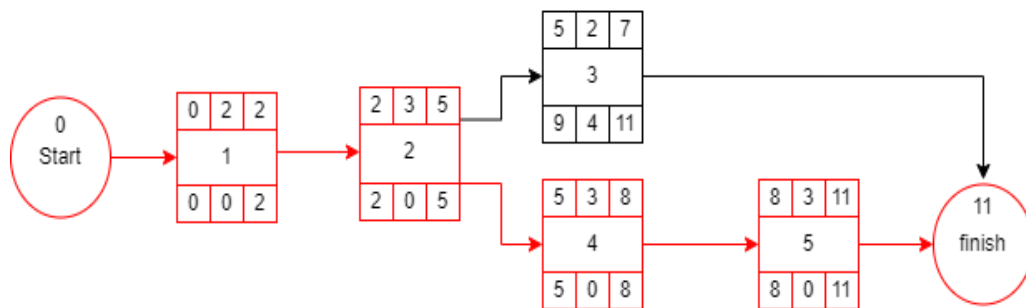
Total Estimated duration = 11 months.
Budget at Completion (BaC) = 3700 k$

- Delta cost = 600+1200+400*0.5+1200/3 – (600+1400+200+500) = -300k$
  The project is, so far, 300k$ over budget.

- Given that the project started 7 months ago:
  Estimated timeline:
  - Task 1: Done
  - Task 2: Done
  - Task 3: has 4 months float so it could be done or still not started or anything in between.
  - Task 4: 66.7% done

The delay in task 3 is less than the task float, so it is acceptable.
However, task 4 is on the critical path, so it will delay the entire project.

The project is (0.333*3=)1 month behind schedule.

- Estimate-actual = 600+1200+400+1200+300 − (600+1400+200*2+500*3+300) = -500k$
  If the progress proceeds with the same rate, then by the end of the project it will be around **500 k$** over budget (assuming task 5 costs about the same as its allotted budget).

After 7 months

Task	Progress	budget	PV	EV	AC	
1	100%	600	600	600	600	
2	100%	1200	1200	1200	1400	
3	50%	400	0-400	.5*400 = 200	200	
4	33.3%	1200	1200*2/3 = 800	1200/3 = 400	500	
5	0%	300	0	0	0	
total		3700		2400	2700	

PV at 7 months:
- when task 3 is planned as early as possible (should be completely done): PV = 3000 k$
- when task 3 is planned as late as possible (would not have started): PV = 2600 k$
- Average Case: PV = 2800 k$

Cost variance (CV)	$CV = Earned\ Value\ (EV) - Acual\ Cost\ (AC)$	2400-2700 = -300 k$
Schedule Variance (SV)	$SV = Earned\ Value\ (EV) - Planned\ Value\ (PV)$ For: Max PV Min PV Avg PV	2400-3000 = -600 k$ 2400-2600 = -200 k$ 2400-2800 = -400 k$
Cost Performance Index (CPI)	$CPI = \dfrac{Earned\ Value\ (EV)}{Acual\ Cost\ (AC)}$	2400/2700 = 0.89
Schedule Performance Index (SPI)	$SPI = \dfrac{Earned\ Value\ (EV)}{Planned\ Value\ (PV)}$ For: Max PV Min PV Avg PV	For PV=3000: SPI = 0.8 For PV=2600 SPI = 0.93 For PV = 2800 SPI = 0.86
Estimate At Completion (EAC)	$EAC = \dfrac{BAC}{CPI}$	3700/0.889 = 4160 k$