

SCHEDULE MANAGEMENT

A General Look

SCHEDULE MANAGEMENT

A General Look

Schedule Management

	Initiating	Planning	Executing	Monitoring & Controlling	Closing
Schedule Management	0	5	0	1	0

- ➔ Plan Schedule Management // Planning
- ➔ Define Activities // Planning
- ➔ Sequence Activities // Planning
- ➔ Estimate Activity Durations // Planning
- ➔ Develop Schedule // Planning
- ➔ Control Schedule // M&C

SCHEDULE MANAGEMENT

Plan Schedule Management

SCHEDULE MANAGEMENT

Plan Schedule Management

Plan Schedule Management

→ Plan how to manage and control the Schedule

Activities involved in this process are:

- The scheduling software is determined
- The scheduling metrics are determined (days/weeks/hours etc.)
- The scheduling tolerances (control thresholds) are determined (How many days of delay is tolerable? What are the upper and lower limits? etc.)
- The scheduling approach to be used is determined
- The accuracy level of the schedule is determined
- The method for controlling and managing the variances, changes and the revisions is determined
- If it is an adaptive environment, the length of the releases and the iterations are determined
- The format of the reports are determined

Schedule Management Plan

Plan Schedule Management Process

What Do We Need? What Do We Use? What Do We Get?

SCHEDULE MANAGEMENT

Plan Schedule Management

What do we get?

- Schedule Management Plan

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SCHEDULE MANAGEMENT

Plan Schedule Management

What do we need?

- Project Charter

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SCHEDULE MANAGEMENT

Plan Schedule Management

What do we need?

- Scope Management Plan

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Plan Schedule Management

What do we need?

- Development Approach

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SCHEDULE MANAGEMENT

Plan Schedule Management

- Scope Management Plan
 - Development Approach
- 
- Project Management Plan

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SCHEDULE MANAGEMENT

Plan Schedule Management

What do we need?

- Enterprise Environmental Factors

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SCHEDULE MANAGEMENT

Plan Schedule Management

What do we need?

- Organizational Process Assets

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SCHEDULE MANAGEMENT

Plan Schedule Management

What do we use?

- Expert Judgment

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SCHEDULE MANAGEMENT

Plan Schedule Management

What do we use?

- Data Analysis (Alternatives Analysis)

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Plan Schedule Management

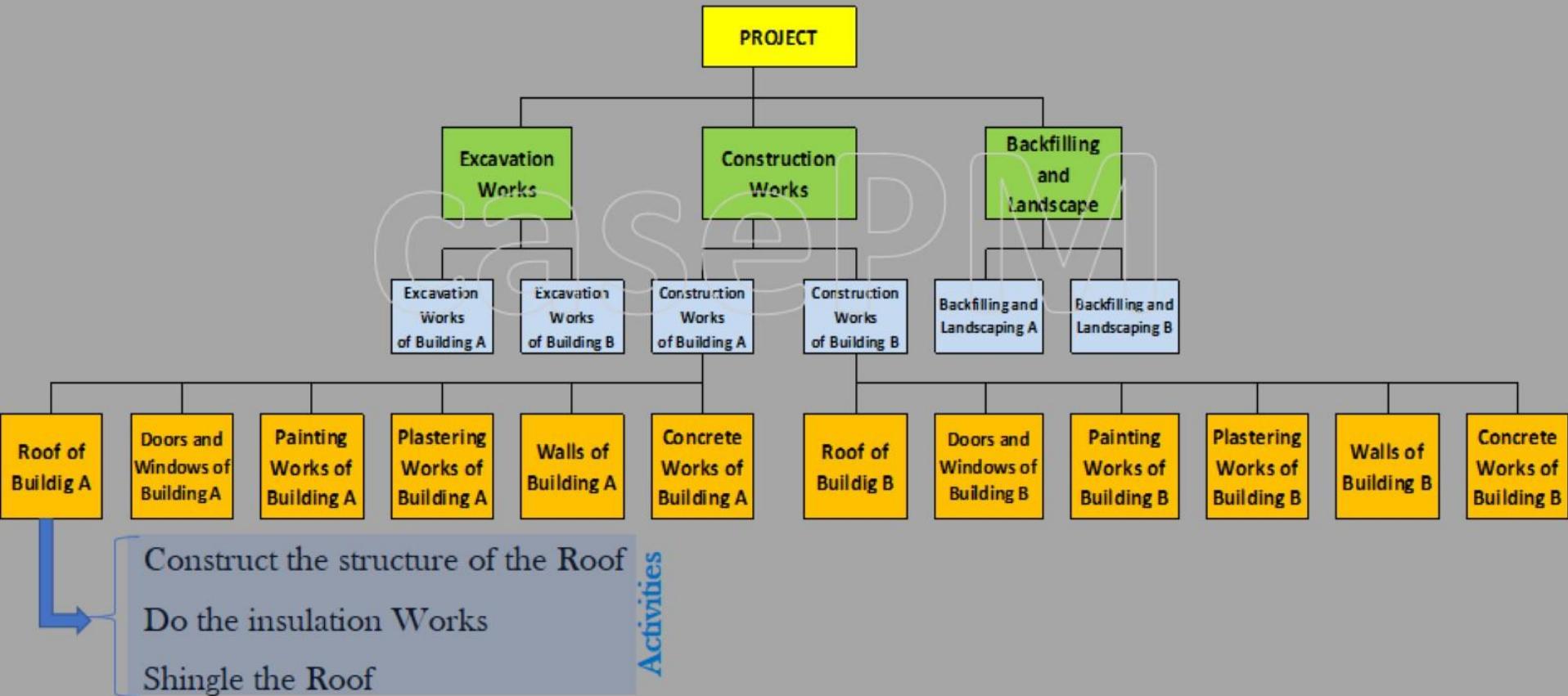
What do we use?

- Meetings

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SCHEDULE MANAGEMENT

Define Activities



SCHEDULE MANAGEMENT

Define Activities

Define Activities Process

- ➔ Activities are defined by decomposing the work packages.
- ➔ Some of the milestones are determined.

Milestone: Important achievement in a Project.

- A milestone is not an activity, it has zero duration.

Activity  Task

Define Activities Process

What Do We Need? What Do We Use? What Do We Get?

SCHEDULE MANAGEMENT

Define Activities

What do we get?

- Activity List

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SCHEDULE MANAGEMENT

Define Activities

What do we get?

- Activity Attributes

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SCHEDULE MANAGEMENT

Define Activities

What do we get?

- Activity Attributes



- Description of the activity
- ID number of the activity
- Assigned work package
- Resource requirements
- Predecessors and successors
- Constraints and assumptions
- Deadlines

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Project Management

SCHEDULE MANAGEMENT

Define Activities

What do we get?

- Milestone List

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SCHEDULE MANAGEMENT

Define Activities

What do we get?

- Change Requests

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SCHEDULE MANAGEMENT

Define Activities

What do we get?

- Revisions in:
 - The Schedule Baseline
 - The Cost Baseline

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SCHEDULE MANAGEMENT

Define Activities

- The Schedule Baseline
- The Cost Baseline

Project
Management
Plan

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SCHEDULE MANAGEMENT

Define Activities

What do we need?

- Schedule Management Plan

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SCHEDULE MANAGEMENT

Define Activities

What do we need?

- Scope Baseline

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SCHEDULE MANAGEMENT

Define Activities

- Schedule Management Plan
- Scope Baseline

Project
Management
Plan

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SCHEDULE MANAGEMENT

Define Activities

What do we need?

- Enterprise Environmental Factors

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SCHEDULE MANAGEMENT

Define Activities

What do we need?

- Organizational Process Assets

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SCHEDULE MANAGEMENT

Define Activities

What do we use?

- Expert Judgment

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SCHEDULE MANAGEMENT

Define Activities

What do we use?

- Decomposition

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SCHEDULE MANAGEMENT

Define Activities

What do we use?

- Meetings

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SCHEDULE MANAGEMENT

Define Activities

What do we use?

- Rolling Wave Planning

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SCHEDULE MANAGEMENT

Define Activities

What do we use?

- Rolling Wave Planning



Iterative (At the beginning, the known components are planned in detail but the unknown components are planned in a high-level manner. In the future, when the unknown parts get clearer, we turn back here and define the detailed activities for the high-level planned parts.)

Progressive Elaboration

SCHEDULE MANAGEMENT

Sequencing the Activities

SCHEDULE MANAGEMENT

Sequencing the Activities

Network Diagram Drawing Methods

- Precedence Diagramming Method - PDM (Activity on Node - AoN)
- Arrow Diagramming Method (ADM) - (Activity on Arrow - AoA)
- Graphical Evaluation and Review Techniques (GERT)

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SCHEDULE MANAGEMENT

Sequencing the Activities

Precedence Diagramming Method (PDM)

Finish-to-Start (FS)



Predecessor

Successor

Start-to-Start (SS)



Finish-to-Finish (FF)



Start-to-Finish (SF)

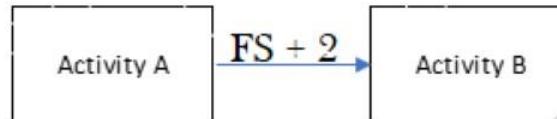


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Sequencing the Activities

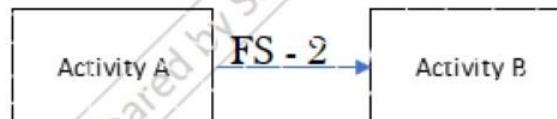
Precedence Diagramming Method (PDM)

LAG: Delay in the successor activity.



Activity B starts 2 days **after** Activity A finishes

LEAD: Acceleration of the successor activity.



Activity B starts 2 days **before** Activity A finishes

SCHEDULE MANAGEMENT

Sequencing the Activities

Precedence Diagramming Method (PDM)

Dependency Types:

- Hard Logic (Mandatory Dependency)
- Soft Logic (Discretionary Dependency)
- External Dependency
- Internal Dependency

Team

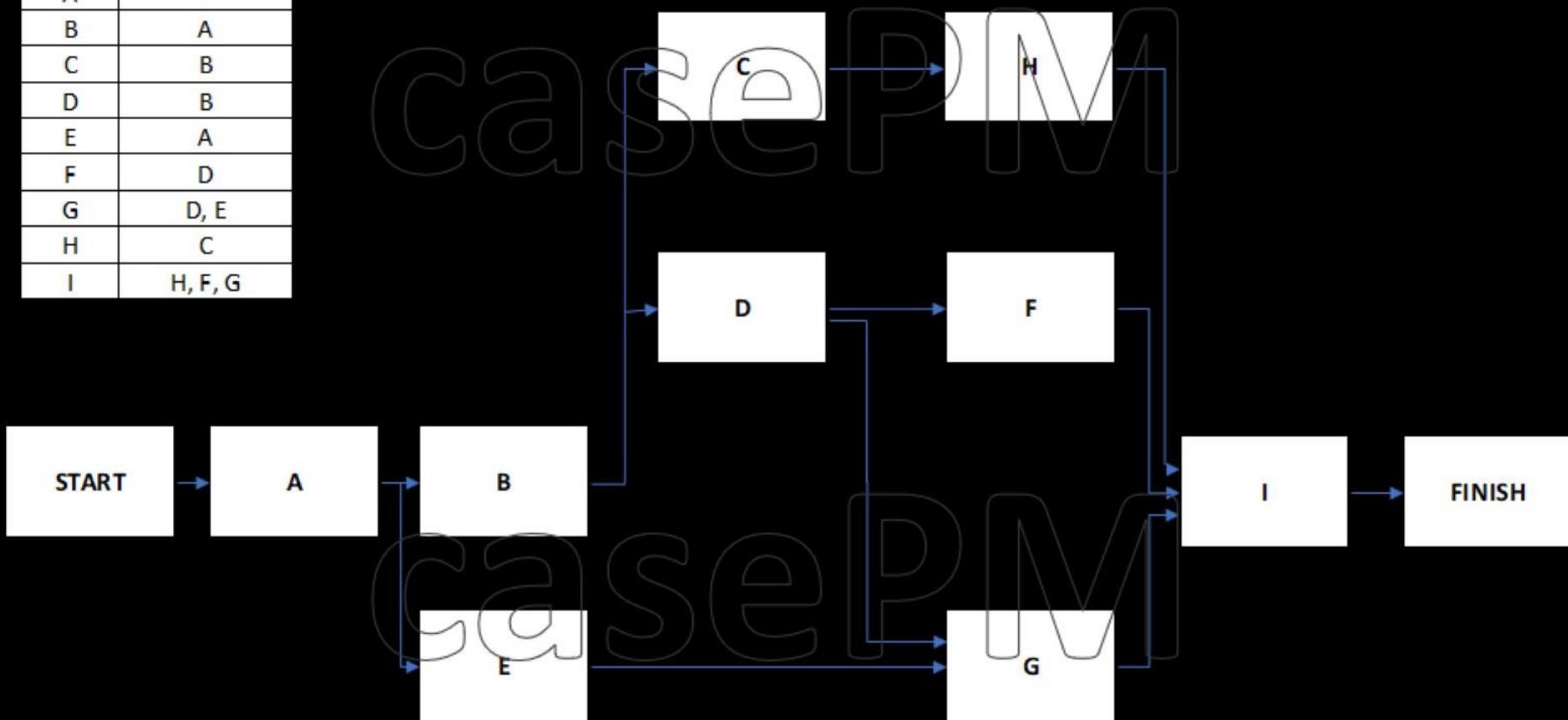
PM (Team
may also help)

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SCHEDULE MANAGEMENT

Sequence Activities / Drawing a Network Diagram

Activity	Predecessor
A	-
B	A
C	B
D	B
E	A
F	D
G	D, E
H	C
I	H, F, G



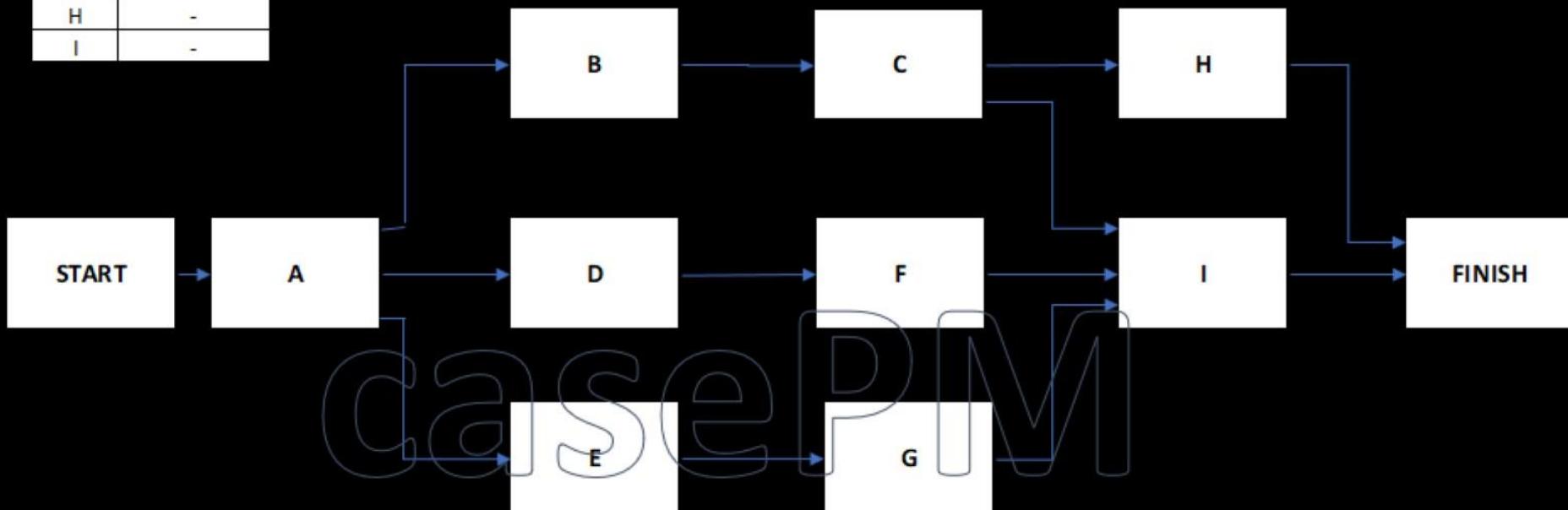
Activity	Successor
A	B, D, E
B	C
C	H, I
D	F
E	G
F	I
G	I
H	-
I	-

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Activity	Successor
A	B, D, E
B	C
C	H, I
D	F
E	G
F	I
G	I
H	-
I	-

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SCHEDULE MANAGEMENT

Sequence Activities / Importance of the Network Diagrams

Network Diagram

- ➔ Primary purpose is the scheduling calculations
- Provides better understanding of the project and the project work flow
- Everyone understands the effect of their work on the project

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Sequence Activities Process

What Do We Need? What Do We Use? What Do We Get?

SCHEDULE MANAGEMENT

Sequence Activities

What do we get?

- Schedule Network Diagrams

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SCHEDULE MANAGEMENT

Sequence Activities

What do we get?

- Revisions in:
 - Activity List
 - Activity Attributes
 - Milestone List

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SCHEDULE MANAGEMENT

Sequence Activities

What do we get?

- Revisions in:
 - Activity List
 - Activity Attributes
 - Milestone List
 - Assumption Log

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SCHEDULE MANAGEMENT

Sequence Activities

- Activity List
- Activity Attributes
- Milestone List
- Assumption Log

} Project Documents

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SCHEDULE MANAGEMENT

Sequence Activities

What do we need?

- Schedule Management Plan

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SCHEDULE MANAGEMENT

Sequence Activities

What do we need?

- Scope Baseline

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SCHEDULE MANAGEMENT

Sequence Activities

- Schedule Management Plan
- Scope Baseline

} Project
Management Plan

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SCHEDULE MANAGEMENT

Sequence Activities

What do we need?

- Activity List & Activity Attributes

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SCHEDULE MANAGEMENT

Sequence Activities

What do we need?

- Milestone List
- Assumption Log

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SCHEDULE MANAGEMENT

Sequence Activities

- Activity List
- Activity Attributes
- Milestone List
- Assumption Log

} Project Documents

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SCHEDULE MANAGEMENT

Sequence Activities

What do we need?

- Enterprise Environmental Factors

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SCHEDULE MANAGEMENT

Sequence Activities

What do we need?

- Organizational Process Assets

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SCHEDULE MANAGEMENT

Sequence Activities

What do we use?

- Precedence Diagramming Method

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SCHEDULE MANAGEMENT

Sequence Activities

What do we use?

- Dependency Determination and Integration

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SCHEDULE MANAGEMENT

Sequence Activities

What do we use?

- Leads and Lags

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SCHEDULE MANAGEMENT

Sequence Activities

What do we use?

- Project Management Information System

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SCHEDULE MANAGEMENT

Estimate Activity Durations / Estimation Techniques

SCHEDULE MANAGEMENT

Estimate Activity Durations

Estimation Techniques

- Same techniques are used while estimating the duration and the cost of the activities.
- One Point Estimating
- Analogous Estimating
- Bottom-up Estimating
- Parametric Estimating
- Three Point Estimating

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SCHEDULE MANAGEMENT

Estimate Activity Durations

Estimation Techniques

→ Same techniques are used while estimating the duration and the cost of the activities.

- **One Point Estimating**
- Analogous Estimating
- Bottom-up Estimating
- Parametric Estimating
- Three Point Estimating

One Point Estimating Technique

Ex: Roof construction will take 15 days

SCHEDULE MANAGEMENT

Estimate Activity Durations

Estimation Techniques

- Same techniques are used while estimating the duration and the cost of the activities.
- One Point Estimating
- **Analogous Estimating**
- Bottom-up Estimating
- Parametric Estimating
- Three Point Estimating

Analogous Estimating Technique

(Top-down Estimating Technique)

- Expert judgment is required
- Fast but gives less accurate results

Ex: Two years ago, we completed the construction of a building in 12 months. This year, in another city, we will construct a **similar** but a little bit smaller building. We will complete the new construction in 11 months. **If the similarity increases, the accuracy also increases!**

SCHEDULE MANAGEMENT

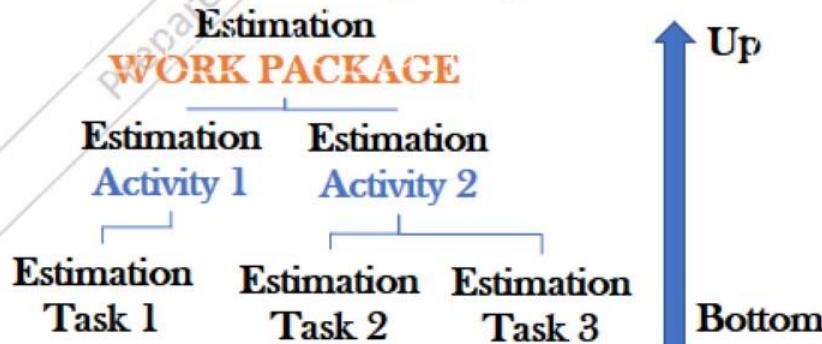
Estimate Activity Durations

Estimation Techniques

- Same techniques are used while estimating the duration and the cost of the activities.
- One Point Estimating
- Analogous Estimating
- **Bottom-up Estimating**
- Parametric Estimating
- Three Point Estimating

Bottom-up Estimating Technique

- Assembling the estimations of the parts of the activities (tasks) or work packages



SCHEDULE MANAGEMENT

Estimate Activity Durations

Estimation Techniques

- Same techniques are used while estimating the duration and the cost of the activities.
- One Point Estimating
- Analogous Estimating
- Bottom-up Estimating
- **Parametric Estimating** → **No calculation**
- Three Point Estimating

Parametric Estimating Technique

- Standard metrics, industry requirements, other sources and historical information is used.
- Results are more accurate.

Ex: In the previous piping project, 1,000 meters of piping cost us \$10,000. Now, we will apply similar piping, for another project. This time, the total length of the piping will be 2,000 meters. Since, our cost per meter was \$10 (which we calculate from $\$10,000/1,000$ meters), new piping project will cost us \$20,000 (which we calculate from $\$2,000 \times \10).

SCHEDULE MANAGEMENT

Estimate Activity Durations

Estimation Techniques

→ Same techniques are used while estimating the duration and the cost of the activities.

- One Point Estimating
- Analogous Estimating
- Bottom-up Estimating
- **Parametric Estimating**

- Three Point Estimating

Parametric Estimating Technique

- Regression Analysis • Learning Curve

→ No calculation

→ Do calculation

SCHEDULE MANAGEMENT

Estimate Activity Durations

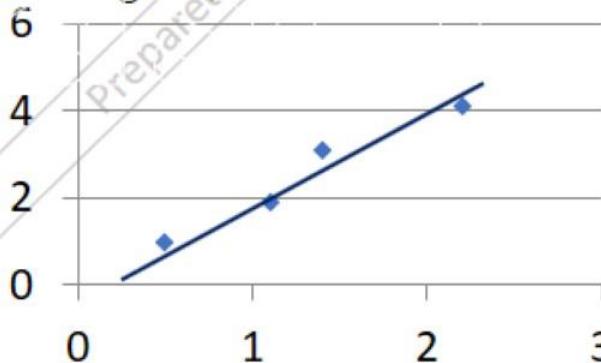
Estimation Techniques

- Same techniques are used while estimating the duration and the cost of the activities.
- One Point Estimating
- Analogous Estimating
- Bottom-up Estimating
- **Parametric Estimating**
- Three Point Estimating

→ **No** calculation
→ **Do** calculation

Parametric Estimating Technique

- Regression Analysis • Learning Curve
(Scatter Diagram)



SCHEDULE MANAGEMENT

Estimate Activity Durations

Estimation Techniques

→ Same techniques are used while estimating the duration and the cost of the activities.

- One Point Estimating
- Analogous Estimating
- Bottom-up Estimating
- **Parametric Estimating**

- Three Point Estimating

Parametric Estimating Technique

- Regression Analysis • Learning Curve

→ No calculation

→ Do calculation

Ex: You will install a complex application on 100 computers. You start the installation process, and for the first 10 computers, it takes 1 hour to install the program on each computer. But since you learn how to install the program efficiently, other installations take 30 minutes.

SCHEDULE MANAGEMENT

Estimate Activity Durations

Estimation Techniques

- Same techniques are used while estimating the duration and the cost of the activities.
- One Point Estimating
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- Parametric Estimating
- Three Point Estimating

→ No calculation
→ Do calculation

Heuristics

- Heuristics are the mental strategies to make estimations.

SCHEDULE MANAGEMENT

Estimate Activity Durations / Three Point Estimating Technique

SCHEDULE MANAGEMENT

Estimate Activity Durations

Three Point Estimating Technique

- ➔ Used to obtain more realistic duration and cost estimations.
- Optimistic Estimation (O , tO or cO)
- Most Likely Estimation (M , tM or cM)
- Pessimistic Estimation (P , tP or cP)

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SCHEDULE MANAGEMENT

Estimate Activity Durations

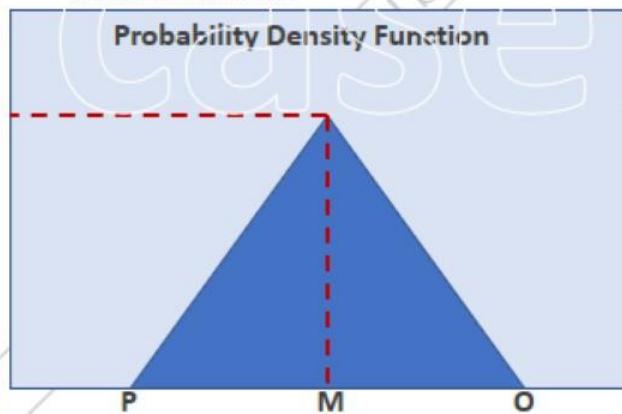
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Triangular Distribution

Beta Distribution

- May also called Simple Distribution or Straight Distribution



Expected Activity Duration = $\frac{P + M + O}{3}$
(or Cost)

SCHEDULE MANAGEMENT

Estimate Activity Durations

Three Point Estimating Technique

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Triangular Distribution

Beta Distribution

Ex: Pessimistic duration of an activity is 14 days. Optimistic duration is 7 days and most likely duration is 9 days. What is the expected activity duration if the distribution is assumed to be a triangular distribution?

SCHEDULE MANAGEMENT

Estimate Activity Durations

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Triangular Distribution

Beta Distribution

Ex: Pessimistic duration of an activity is 14 days. Optimistic duration is 7 days and most likely duration is 9 days. What is the expected activity duration if the distribution is assumed to be a triangular distribution?

$$\text{Expected Activity Duration} = \frac{P + M + O}{3} = \frac{14 + 9 + 7}{3} = \frac{30}{3} = 10$$

SCHEDULE MANAGEMENT

Estimate Activity Durations

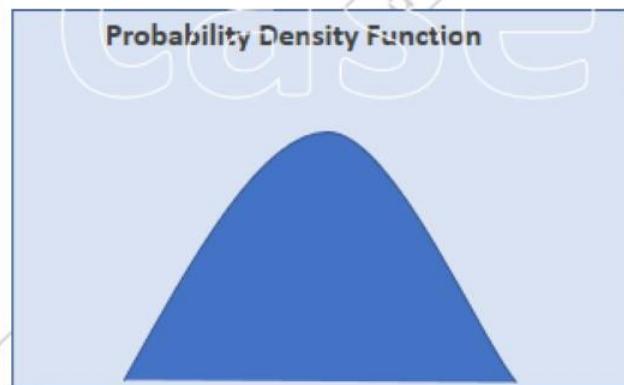
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Triangular Distribution

Beta Distribution

- May also called «Weighted Average», «PERT» or «Program Evaluation and Review Technique»



Expected
Activity Duration = $\frac{P + 4M + O}{6}$
(or Cost)

SCHEDULE MANAGEMENT

Estimate Activity Durations

Three Point Estimating Technique

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Triangular Distribution

Beta Distribution

Ex: Pessimistic duration of an activity is 14 days. Optimistic duration is 7 days and most likely duration is 9 days. What is the expected activity duration if the distribution is assumed to be a beta distribution?

SCHEDULE MANAGEMENT

Estimate Activity Durations

Three Point Estimating Technique

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Triangular Distribution

Beta Distribution

Ex: Pessimistic duration of an activity is 14 days. Optimistic duration is 7 days and most likely duration is 9 days. What is the expected activity duration if the distribution is assumed to be a beta distribution?

$$\text{Expected Activity Duration} = \frac{P + 4M + O}{6} = \frac{14 + (4 \times 9) + 7}{6} = \frac{57}{6} = 9.5$$

SCHEDULE MANAGEMENT

Estimate Activity Durations

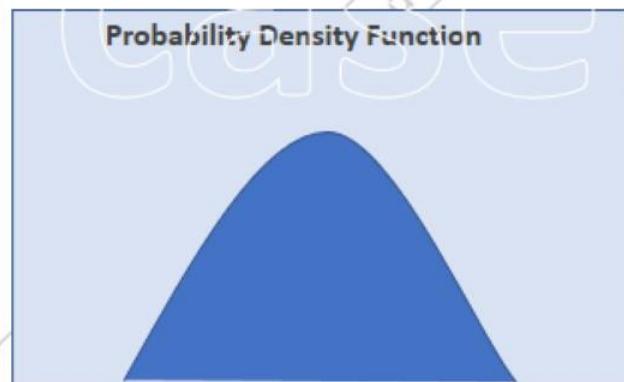
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Triangular Distribution

Beta Distribution

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$$\text{Expected Activity Duration} = \frac{P + 4M + O}{6}$$

(or Cost)

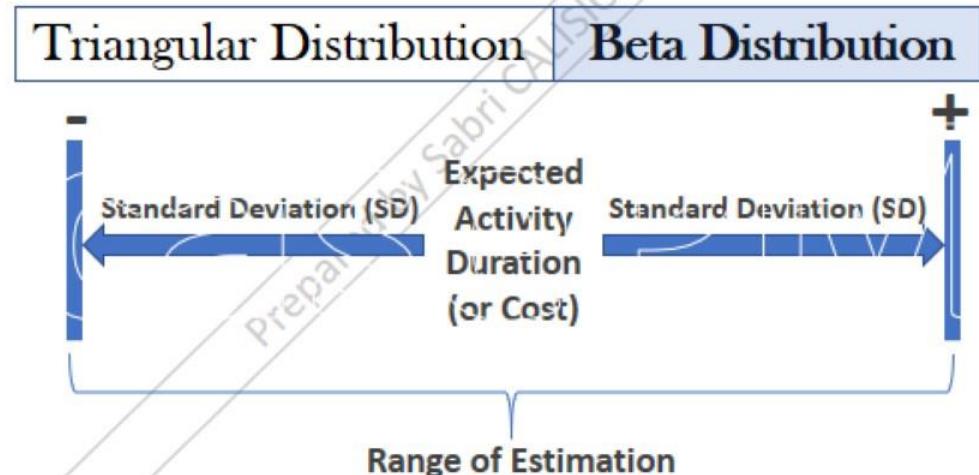
$$\text{Standard Deviation} = \frac{P - O}{6}$$

SCHEDULE MANAGEMENT

Estimate Activity Durations

Three Point Estimating Technique

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SCHEDULE MANAGEMENT

Estimate Activity Durations

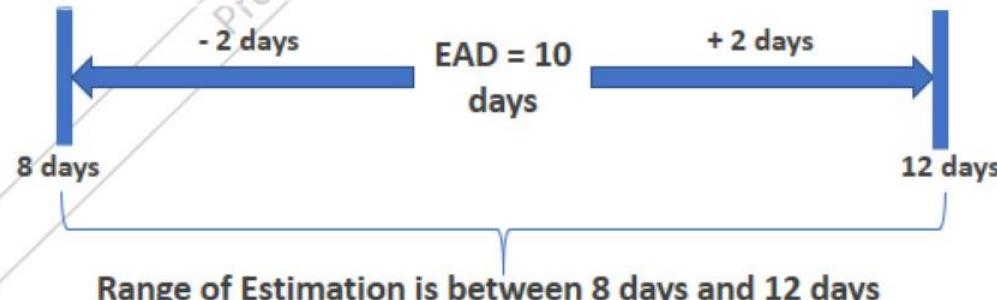
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Triangular Distribution

Beta Distribution

Ex: Expected Activity Duration (EAD) of an activity is 10 days and Standard Deviation is 2 days. → We understand that, although the expected duration is 10 days, it may be completed between a range of 8 days ($10-2$) and 12 days ($10+2$).

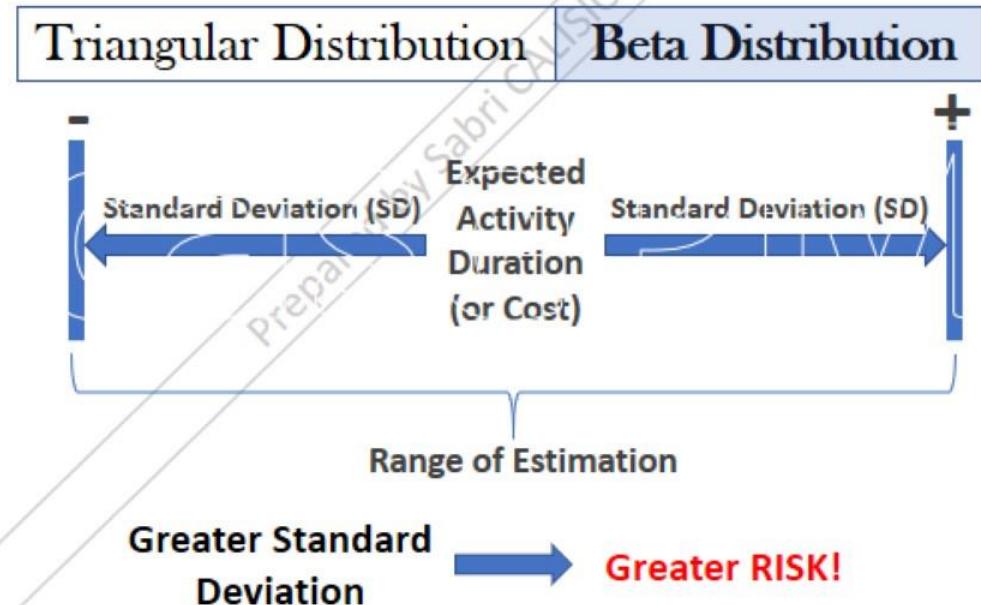


SCHEDULE MANAGEMENT

Estimate Activity Durations

Three Point Estimating Technique

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SCHEDULE MANAGEMENT

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Triangular Distribution

Beta Distribution

Ex: Pessimistic duration of an activity is 14 days. Optimistic duration is 7 days and most likely duration is 9 days. What is the Standard Deviation?

SCHEDULE MANAGEMENT

Estimate Activity Durations

Three Point Estimating Technique

→ Used to obtain more realistic duration and cost estimations.

- Optimistic Estimation (O , tO or cO)
- Most Likely Estimation (M , tM or cM)
- Pessimistic Estimation (P , tP or cP)

Triangular Distribution

Beta Distribution

Ex: Pessimistic duration of an activity is 14 days. Optimistic duration is 7 days and most likely duration is 9 days. What is the Standard Deviation?

If the distribution type is not mentioned in the question, always assume that this is a Beta Distribution!

SCHEDULE MANAGEMENT

Estimate Activity Durations

Three Point Estimating Technique

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- Pessimistic Estimation (P, tP or cP)

Triangular Distribution

Beta Distribution

Ex: Pessimistic duration of an activity is 14 days. Optimistic duration is 7 days and most likely duration is 9 days. What is the Standard Deviation?

$$\text{Standard Deviation} = \frac{P - O}{6} = \frac{14 - 7}{6} = \frac{7}{6} = 1.17$$

SCHEDULE MANAGEMENT

Estimate Activity Durations

Three Point Estimating Technique

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- Optimistic Estimation (O , tO or cO)
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Triangular Distribution

Beta Distribution

Ex: Pessimistic duration of an activity is 14 days. Optimistic duration is 7 days and most likely duration is 9 days. What is the Standard Deviation?

$$EAD = 9.5$$

$$SD = 1.17$$

SCHEDULE MANAGEMENT

Estimate Activity Durations

Three Point Estimating Technique

→ Used to obtain more realistic duration and cost estimations.

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Triangular Distribution

Beta Distribution

Ex: Pessimistic duration of an activity is 14 days. Optimistic duration is 7 days and most likely duration is 9 days. What is the Standard Deviation?

$$\begin{aligned} EAD &= 9.5 \\ SD &= 1.17 \end{aligned}$$

→ Possible Range = $9.5 +/ - 1.17$

→ Possible Range is between 8.33 and 10.67
 $(9.5-1.17) \quad (9.5+1.17)$

SCHEDULE MANAGEMENT

Estimate Activity Durations

SCHEDULE MANAGEMENT

Estimate Activity Durations

Padding

- ➔ Adding extra time (or cost) on the estimation
- ➔ Padding is NOT ALLOWED!

Ex: You are the Scheduling Responsible and asking the duration estimate for the roof construction, and the guy who is responsible for this work knows that he can most probably complete this work in 20 days. But since he knows that there is a risk of materials to be supplied late, he tells you he can complete this work in 25 days and he says this is his best guess for this work. He thinks, if he completes the work in 25 days, which is the worst scenario, no one will ask him why he is late.

SCHEDULE MANAGEMENT

Estimate Activity Durations

Padding

- ➔ Adding extra time (or cost) on the estimation
- ➔ Padding is NOT ALLOWED!
- ➔ Project Manager is responsible for preparing a realistic Schedule.
- ➔ Three-point Estimating Technique helps us overcome this problem.
- ➔ After providing the realistic estimations, we need to think about the risks, and add contingency reserves.

SCHEDULE MANAGEMENT

Estimate Activity Durations

While estimating the durations, the followings should be considered:

→ Law of diminishing returns

1 Painter → 4 days

2 Painters → 2 days

4 Painters → 1 day

1.5 days

SCHEDULE MANAGEMENT

Estimate Activity Durations

While estimating the durations, the followings should be considered:

- ➔ Law of diminishing returns
- ➔ Experience, capability and number of resources
- ➔ Technology to be used
- ➔ Team motivation

SCHEDULE MANAGEMENT

Estimate Activity Durations

The Project Manager:

- Ensures the team has enough information for the estimating work
- Motivates the team to provide realistic and refined estimates
- Determines the necessary techniques to prevent padding
- Checks if the estimations are reliable and logical
- Determines the contingency reserves
- Ensures the assumptions are documented

Estimate Activity Durations Process

What Do We Need? What Do We Use? What Do We Get?

SCHEDULE MANAGEMENT

Estimate Activity Durations

What do we get?

- Duration Estimates

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SCHEDULE MANAGEMENT

Estimate Activity Durations

What do we get?

- Basis of Estimates
 - ➔ Constraints, assumptions, risks
 - ➔ Trust level of the estimate
 - ➔ Range estimation for the estimates (ex: ±5%)

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SCHEDULE MANAGEMENT

Estimate Activity Durations

What do we get?

- Revisions in:
 - Activity Attributes

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SCHEDULE MANAGEMENT

Estimate Activity Durations

What do we get?

- Revisions in:
 - Activity Attributes
 - Assumption Log

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SCHEDULE MANAGEMENT

Estimate Activity Durations

What do we get?

- Revisions in:
 - Activity Attributes
 - Assumption Log
 - Lessons Learned Register

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SCHEDULE MANAGEMENT

Estimate Activity Durations

- Activity Attributes
- Assumption Log
- Lessons Learned Register

Project Documents

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SCHEDULE MANAGEMENT

Estimate Activity Durations

What do we need?

- Schedule Management Plan

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SCHEDULE MANAGEMENT

Estimate Activity Durations

What do we need?

- Scope Baseline

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SCHEDULE MANAGEMENT

Estimate Activity Durations

- Schedule Management Plan
- Scope Baseline

} Project
Management Plan

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SCHEDULE MANAGEMENT

Estimate Activity Durations

What do we need?

- Activity List
- Activity Attributes

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SCHEDULE MANAGEMENT

Estimate Activity Durations

What do we need?

- Assumption Log

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SCHEDULE MANAGEMENT

Estimate Activity Durations

What do we need?

- Lessons Learned Register

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SCHEDULE MANAGEMENT

Estimate Activity Durations

What do we need?

- Milestone List

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SCHEDULE MANAGEMENT

Estimate Activity Durations

What do we need?

- Project Team Assignments
- Resource Breakdown Structure
- Resource Calendars
- Resource Requirements

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SCHEDULE MANAGEMENT

Estimate Activity Durations

What do we need?

- Risk Register

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SCHEDULE MANAGEMENT

Estimate Activity Durations

- Activity List
- Activity Attributes
- Assumption Log
- Lessons Learned Register
- Milestone List
- Project Team Assignments
- Resource Breakdown Structure
- Resource Calendars
- Resource Requirements
- Risk Register

Project Documents

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SCHEDULE MANAGEMENT

Estimate Activity Durations

What do we need?

- Enterprise Environmental Factors

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SCHEDULE MANAGEMENT

Estimate Activity Durations

What do we need?

- Organizational Process Assets

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SCHEDULE MANAGEMENT

Estimate Activity Durations

What do we use?

- Expert Judgment

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SCHEDULE MANAGEMENT

Estimate Activity Durations

What do we use?

- Analogous, Parametric, Three-point & Bottom-up Estimating

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SCHEDULE MANAGEMENT

Estimate Activity Durations

What do we use?

- Data Analysis methods like Alternatives Analysis, Reserve Analysis, and etc.

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SCHEDULE MANAGEMENT

Estimate Activity Durations

What do we use?

- Data Analysis methods like **Alternatives Analysis**, Reserve Analysis, and etc.

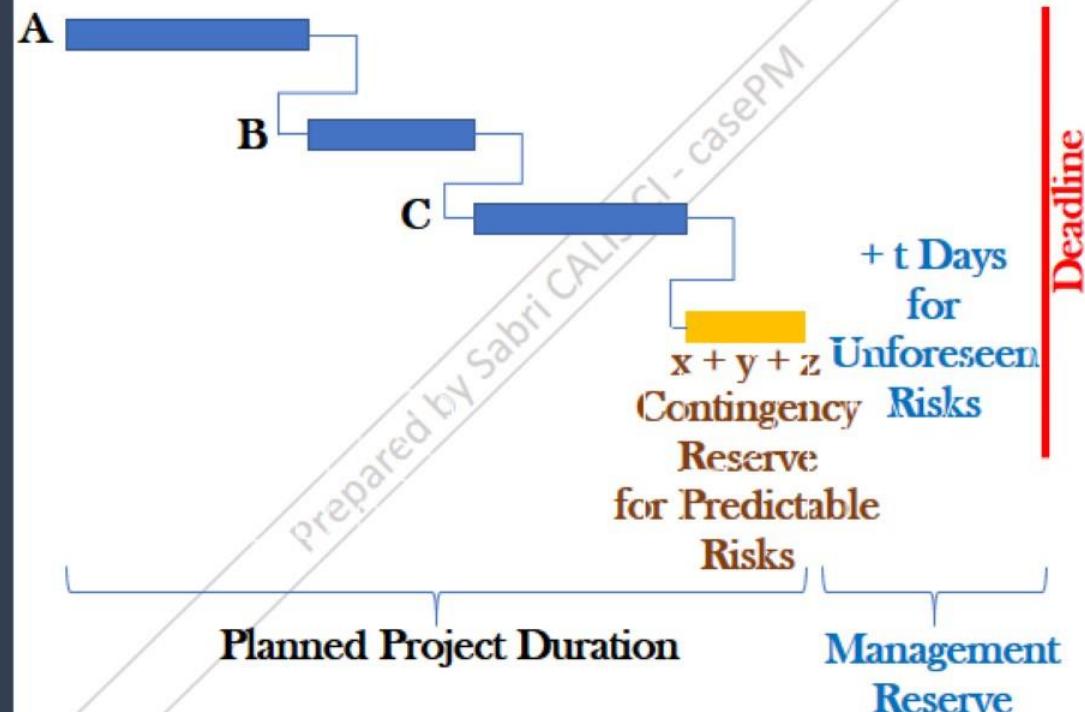
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SCHEDULE MANAGEMENT

Estimate Activity Durations

What do we use?

- Data Analysis methods like Alternatives Analysis, Reserve Analysis, and etc.



SCHEDULE MANAGEMENT

Estimate Activity Durations

What do we use?

- Decision Making techniques like Voting and etc.

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SCHEDULE MANAGEMENT

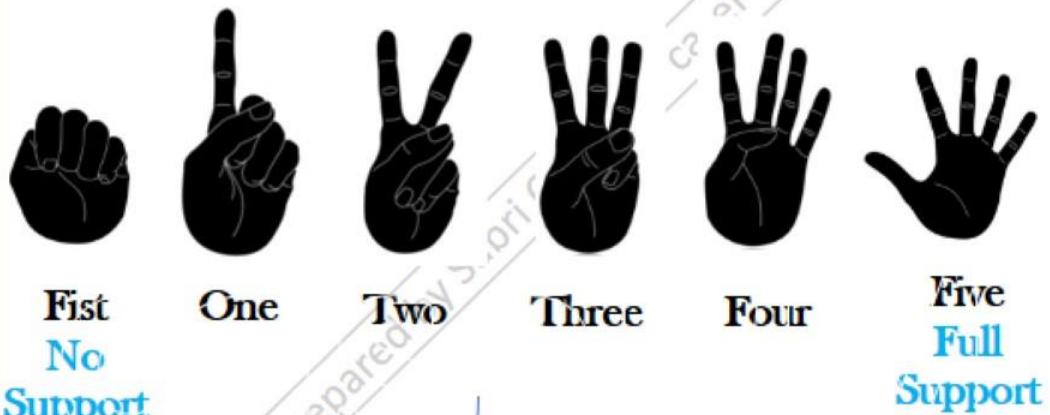
Estimate Activity Durations

What do we use?

- Decision Making techniques like Voting and etc.

Plan-driven Projects → Majority, Plurality, Unanimity

Change-driven Projects → Fist-to-five (or Fist-of-five)



Explains his/her objections

SCHEDULE MANAGEMENT

Estimate Activity Durations

What do we use?

- Meetings

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Estimating Processes: Important Notes

Estimating Processes

Important Notes

- We need to use the Work Breakdown Structure for more precise estimates.
- We need the Management Plans (Schedule Management Plan and Cost Management Plan).
- Duration and cost estimates are related to each other.
- Padding is not allowed.
- Risks should be reflected.
- The person who will do the related work should do the estimation or participate in the estimation works.
- After the Project Management Plan approval, a change request should be created to change an estimate.
- Historical information aids to estimate.
- Estimation is easier and more precise for smaller work components.
- The Project Manager is responsible for the correctness of the estimates.

SCHEDULE MANAGEMENT

Develop Schedule

SCHEDULE MANAGEMENT

Develop Schedule

Develop Schedule Process

Schedule Management Plan is created

Activities are defined

Activities are sequenced

Activity Durations are estimated

Scheduling calculations

Plan Schedule Management

Define Activities

Sequence Activities

Estimate Activity Durations

Develop Schedule

SCHEDULE MANAGEMENT

Develop Schedule

Schedule Network Analysis

- Critical Path Method (CPM)
- Schedule Compression
- Monte Carlo Analysis
- Resource Optimization
- Agile Release Planning

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SCHEDULE MANAGEMENT

Develop Schedule / Critical Path Method

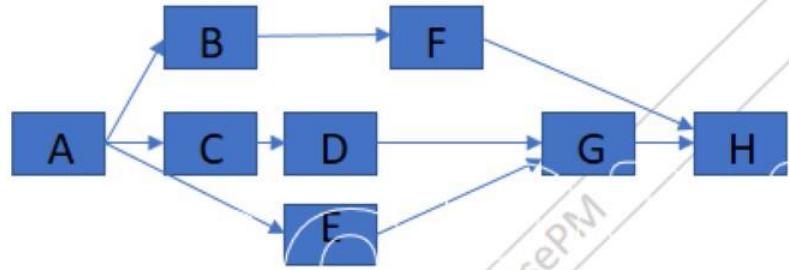
SCHEDULE MANAGEMENT

Develop Schedule / Critical Path Method

SCHEDULE MANAGEMENT

Develop Schedule / Critical Path Method

Critical Path

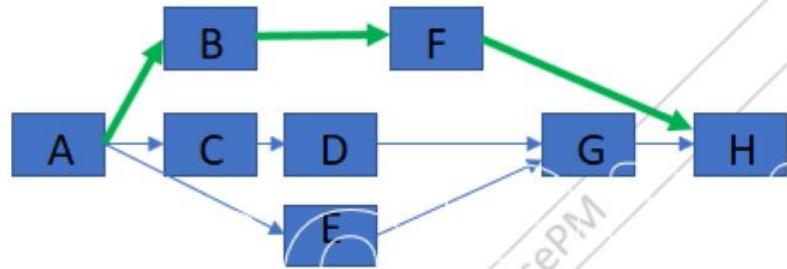


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SCHEDULE MANAGEMENT

Develop Schedule / Critical Path Method

Critical Path



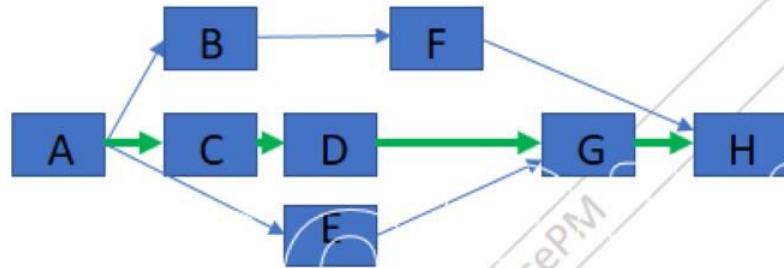
Path 1: A-B-F-H

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SCHEDULE MANAGEMENT

Develop Schedule / Critical Path Method

Critical Path



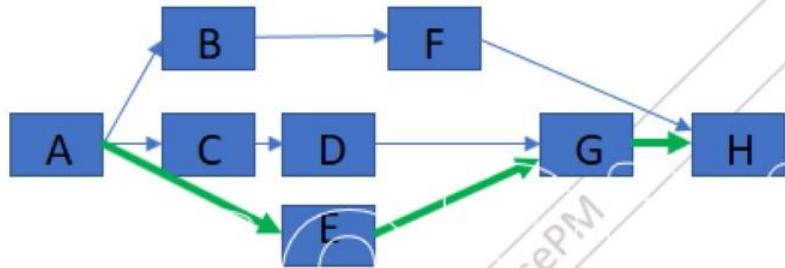
Path 1: A-B-F-H

Path 2: A-C-D-G-H

SCHEDULE MANAGEMENT

Develop Schedule / Critical Path Method

Critical Path



Path 1: A-B-F-H

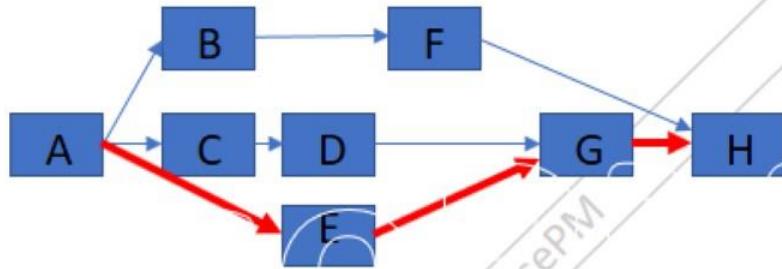
Path 2: A-C-D-G-H

Path 3: A-E-G-H

SCHEDULE MANAGEMENT

Develop Schedule / Critical Path Method

Critical Path



Path 1: A-B-F-H

Float = 0 !!!

Path 2: A-C-D-G-H

Path 3: A-E-G-H → Critical Path

B, C, D, and F may be delayed without affecting other activity durations and the Project duration.

Float
(Slack)

SCHEDULE MANAGEMENT

Develop Schedule / Critical Path Method

Float (Slack) Types

- Total Float
- Free Float
- Project Float

Total Float: An activity's delay tolerance, without affecting the **total project duration**.

Free Float: An activity's delay tolerance, without affecting the **successor activity's early start date**.

Project Float: Activity's delay tolerance, without affecting the **target Project duration**.

SCHEDULE MANAGEMENT

Develop Schedule / Critical Path Method

Critical Path Method

→ Method of determining the critical path (or paths) of a network diagram.

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SCHEDULE MANAGEMENT

Critical Path Method Calculations

SCHEDULE MANAGEMENT

Critical Path Method Calculations

ES: Early Start

EF: Early Finish

ES	Duration	EF
Activity Name		
LS	Float	LF

LS: Late Start

LF: Late Finish

ES (Early Start) is the earliest time that an activity can start.

EF (Early Finish) is the earliest time that an activity can finish.

LS (Late Start) is the latest time that an activity can start.

LF (Late Finish) is the latest time that an activity can finish.

SCHEDULE MANAGEMENT

Critical Path Method Calculations

ES	Duration	EF
Activity Name		
LS	Float	LF

Total Float

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SCHEDULE MANAGEMENT

Critical Path Method Calculations

ES	Duration	EF
Activity Name		
LS	Float	LF

Method 1: Start of day notation
Method 2: End of day notation

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SCHEDULE MANAGEMENT

Critical Path Method Calculations

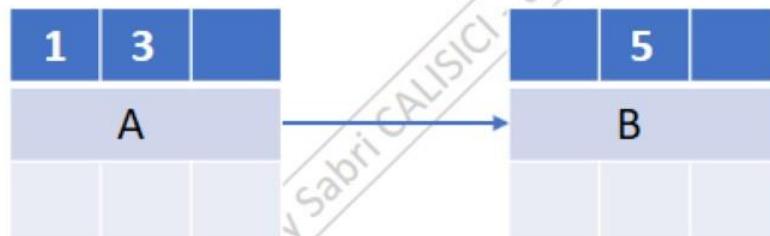
ES	Duration	EF
Activity Name		
LS	Float	LF



SCHEDULE MANAGEMENT

Critical Path Method Calculations

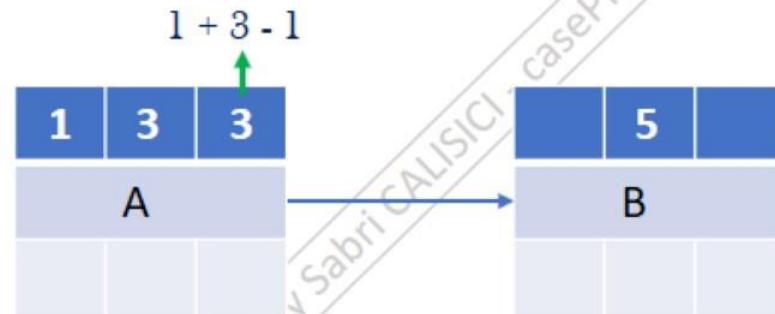
ES	Duration	EF
Activity Name		
LS	Float	LF



SCHEDULE MANAGEMENT

Critical Path Method Calculations

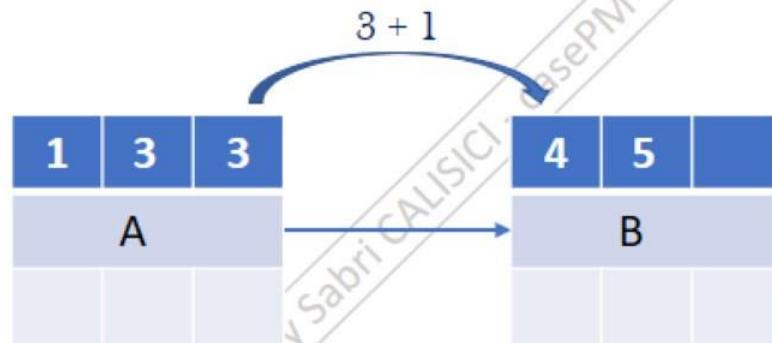
ES	Duration	EF
Activity Name		
LS	Float	LF



SCHEDULE MANAGEMENT

Critical Path Method Calculations

ES	Duration	EF
Activity Name		
LS	Float	LF



SCHEDULE MANAGEMENT

Critical Path Method Calculations

ES	Duration	EF
Activity Name		
LS	Float	LF
1	3	3
A		
4	5	8
B		

Diagram illustrating Critical Path Method calculations for activities A and B:

- Activity A:** ES = 1, Duration = 3, EF = 3.
- Activity B:** LS = 4, Duration = 5, EF = 8.
- The float for Activity B is calculated as $4 + 5 - 1$.
- A blue arrow points from Activity A to Activity B, indicating the flow of the critical path.

SCHEDULE MANAGEMENT

Critical Path Method Calculations

ES	Duration	EF
Activity Name		
LS	Float	LF



Forward Pass

SCHEDULE MANAGEMENT

Critical Path Method Calculations

ES	Duration	EF
Activity Name		
LS	Float	LF



SCHEDULE MANAGEMENT

Critical Path Method Calculations

ES	Duration	EF
Activity Name		
LS	Float	LF

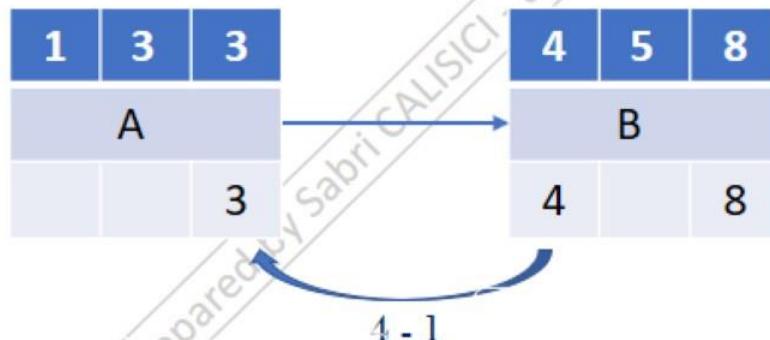


8-5+1

SCHEDULE MANAGEMENT

Critical Path Method Calculations

ES	Duration	EF
Activity Name		
LS	Float	LF



SCHEDULE MANAGEMENT

Critical Path Method Calculations

ES	Duration	EF
Activity Name		
LS	Float	LF



SCHEDULE MANAGEMENT

Critical Path Method Calculations

ES	Duration	EF
Activity Name		
LS	Float	LF

1	3	3	4	5	8
A → B					
1		3	4		8

Backward Pass

SCHEDULE MANAGEMENT

Critical Path Method Calculations

ES	Duration	EF
Activity Name		
LS	Float	LF



$$\text{Float} = \text{LS} - \text{ES}$$

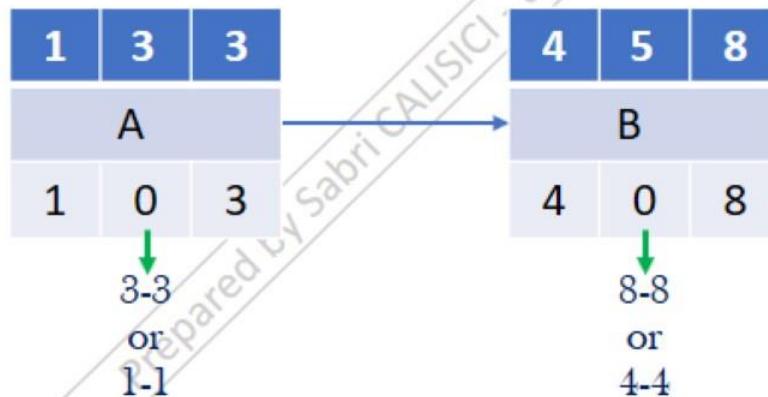
or

$$\text{Float} = \text{LF} - \text{EF}$$

SCHEDULE MANAGEMENT

Critical Path Method Calculations

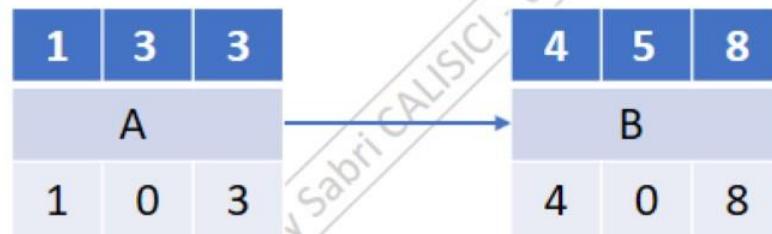
ES	Duration	EF
Activity Name		
LS	Float	LF



SCHEDULE MANAGEMENT

Critical Path Method Calculations

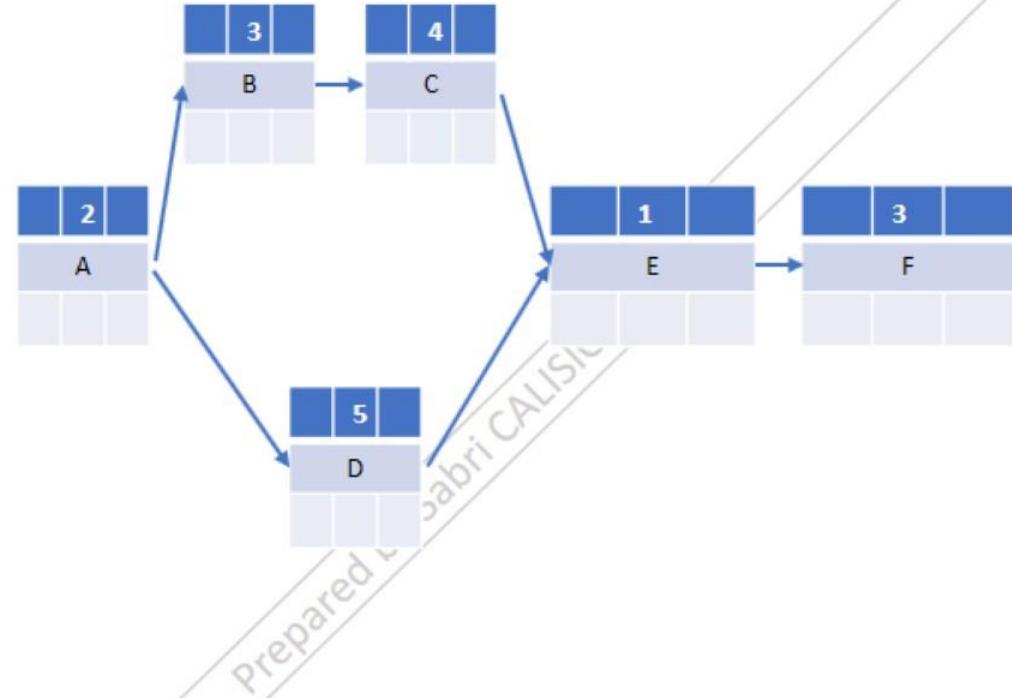
ES	Duration	EF
Activity Name		
LS	Float	LF



SCHEDULE MANAGEMENT

Critical Path Method Calculations

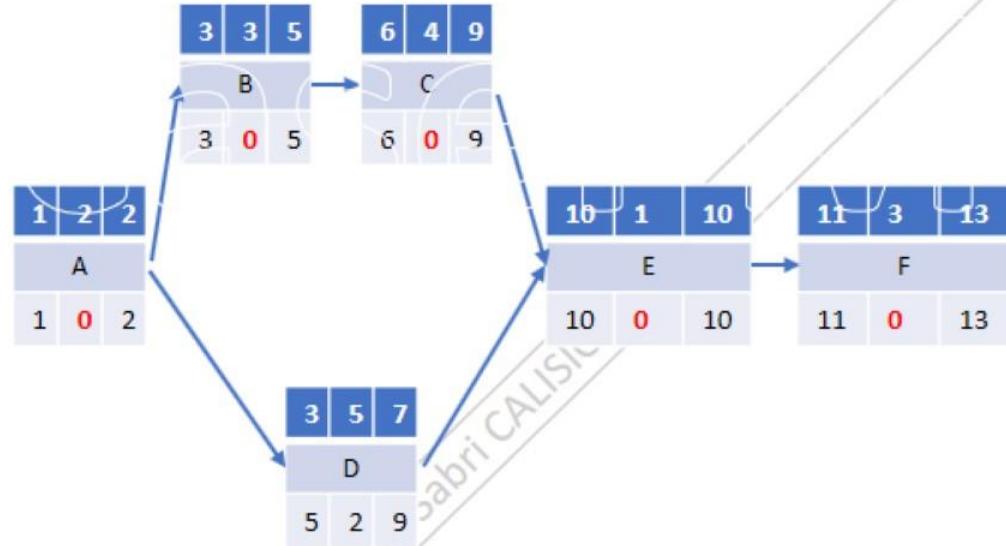
Ex: Determine the critical path.



SCHEDULE MANAGEMENT

Critical Path Method Calculations

Ex: Determine the critical path.

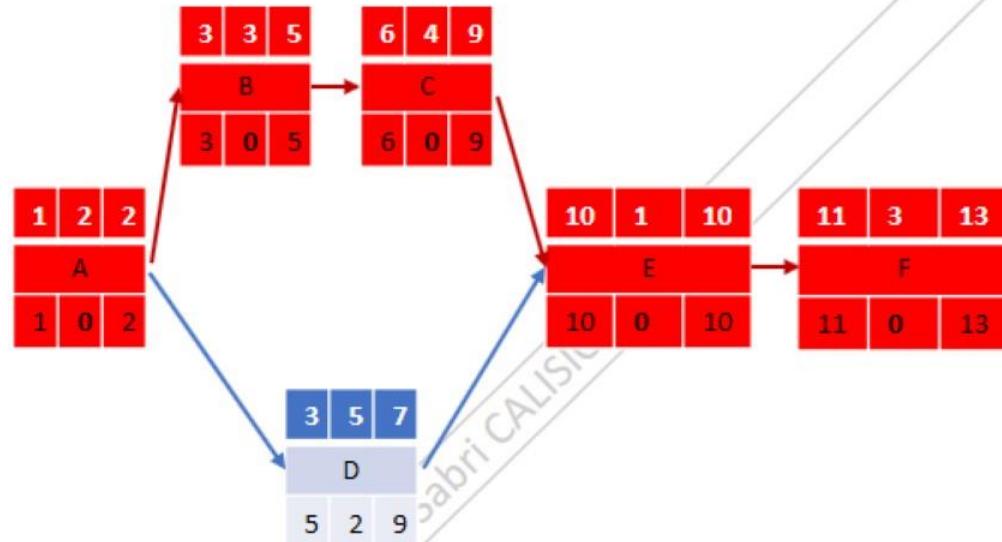


→ The Float for a critical activity is 0.

SCHEDULE MANAGEMENT

Critical Path Method Calculations

Ex: Determine the critical path.

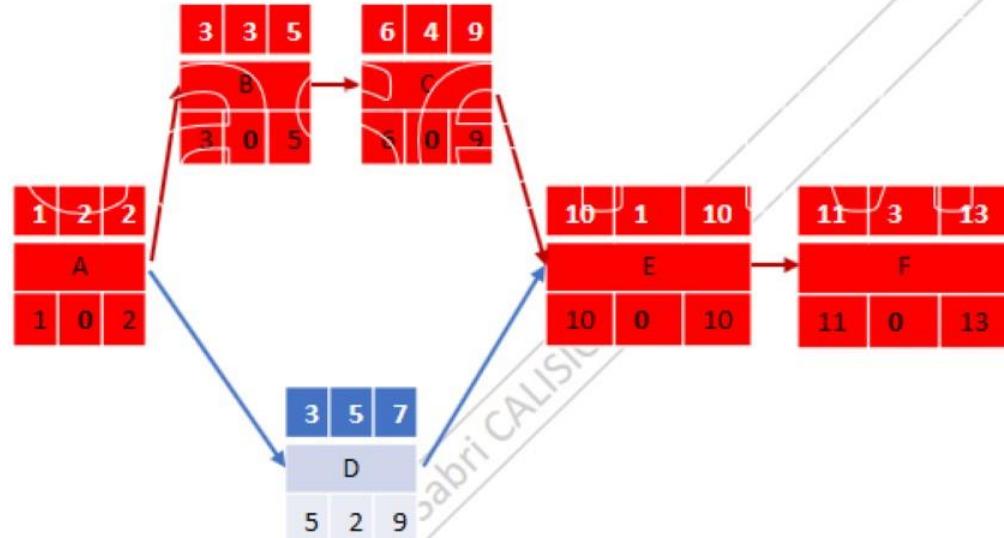


→ The Float for a critical activity is 0.
Critical Path: A,B,C,E,F

SCHEDULE MANAGEMENT

Critical Path Method Calculations

Ex: Determine the critical path.

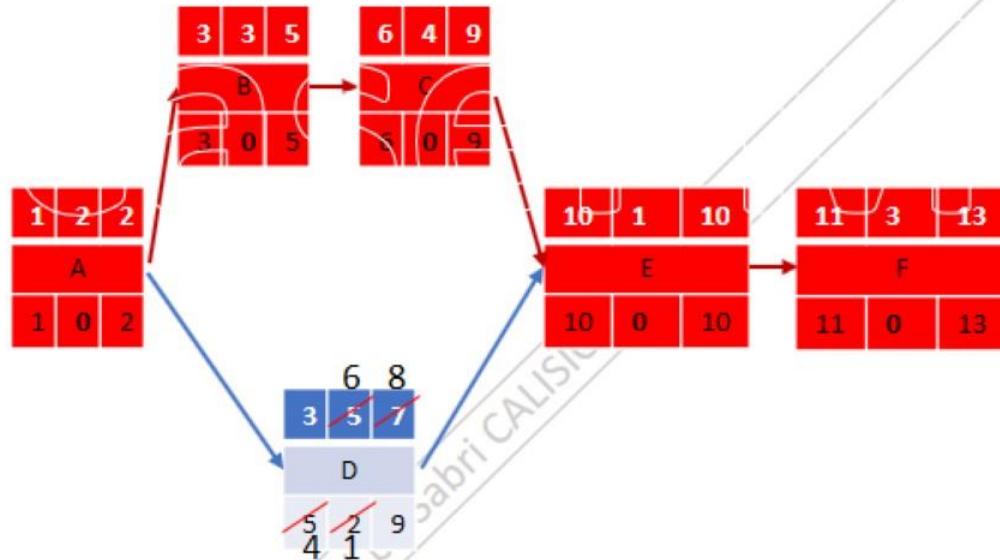


What happens if Activity D delays for 1 day?

SCHEDULE MANAGEMENT

Critical Path Method Calculations

Ex: Determine the critical path.



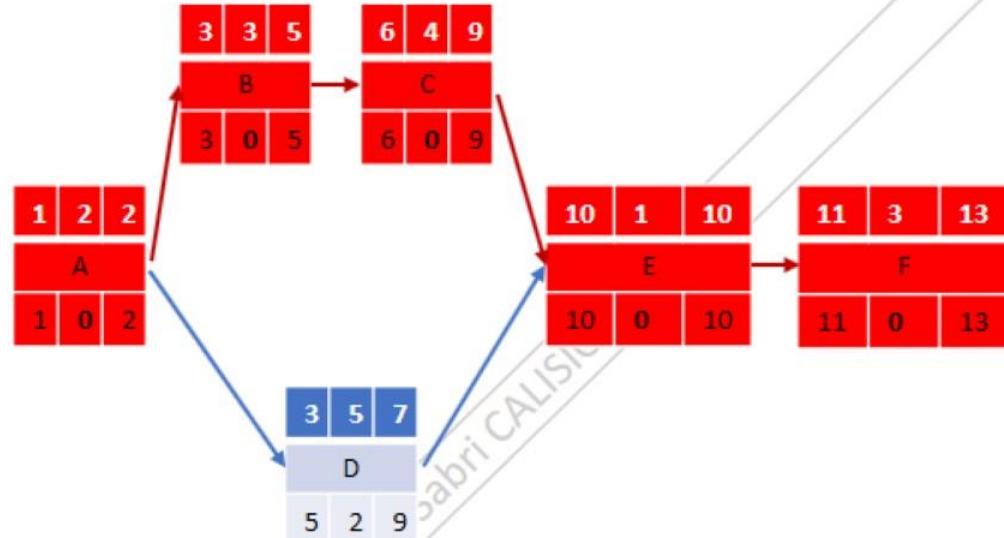
What happens if Activity D delays for 1 day?

- Total duration (Project duration) does not change!
- EF, LS and the Total Float of Activity D are changed!

SCHEDULE MANAGEMENT

Critical Path Method Calculations

Ex: Determine the critical path.

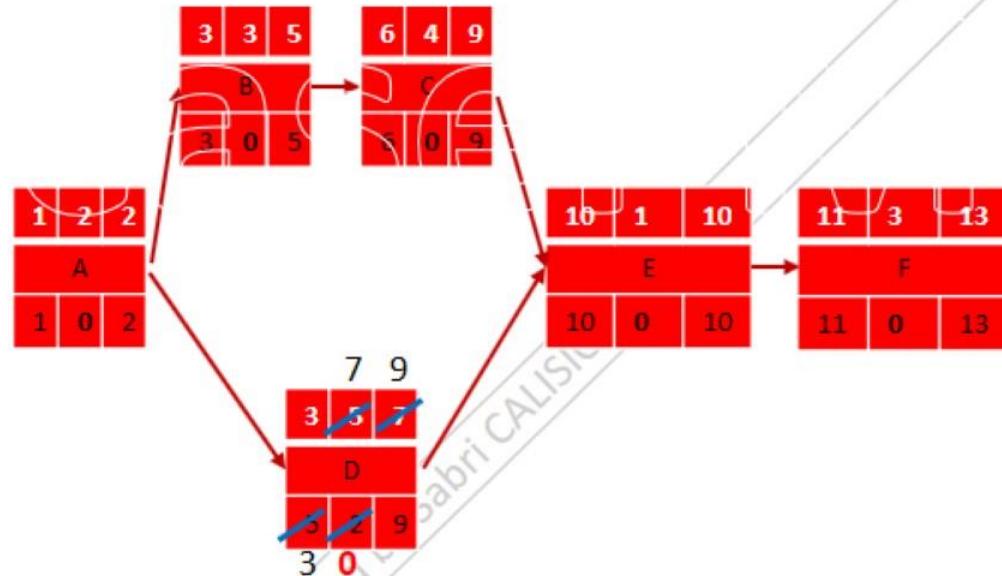


What happens if Activity D delays for 2 days?

SCHEDULE MANAGEMENT

Critical Path Method Calculations

Ex: Determine the critical path.



What happens if Activity D delays for 2 days?

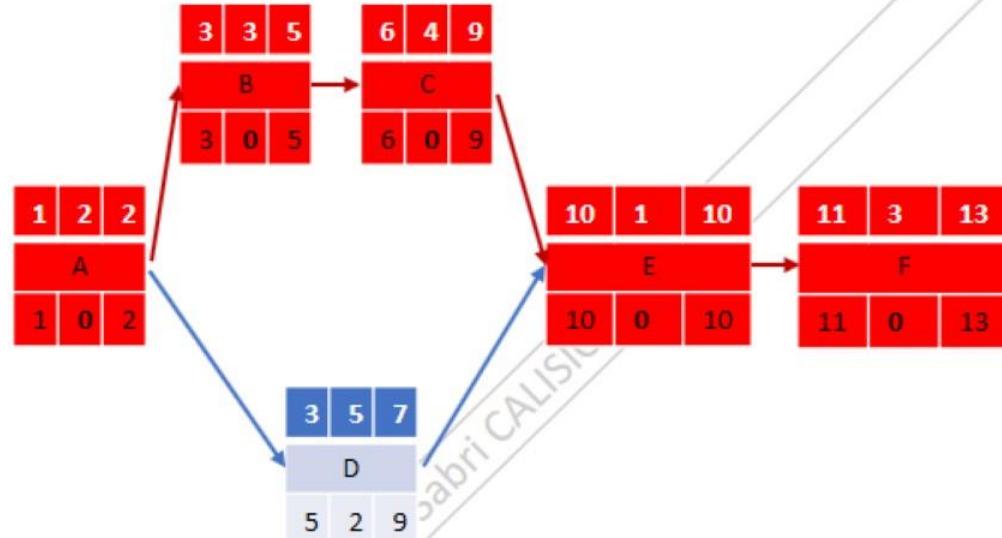
- Project duration does not change
- One more critical path: A-D-E-F !!!

Near Critical Path

SCHEDULE MANAGEMENT

Critical Path Method Calculations

Ex: Determine the critical path.

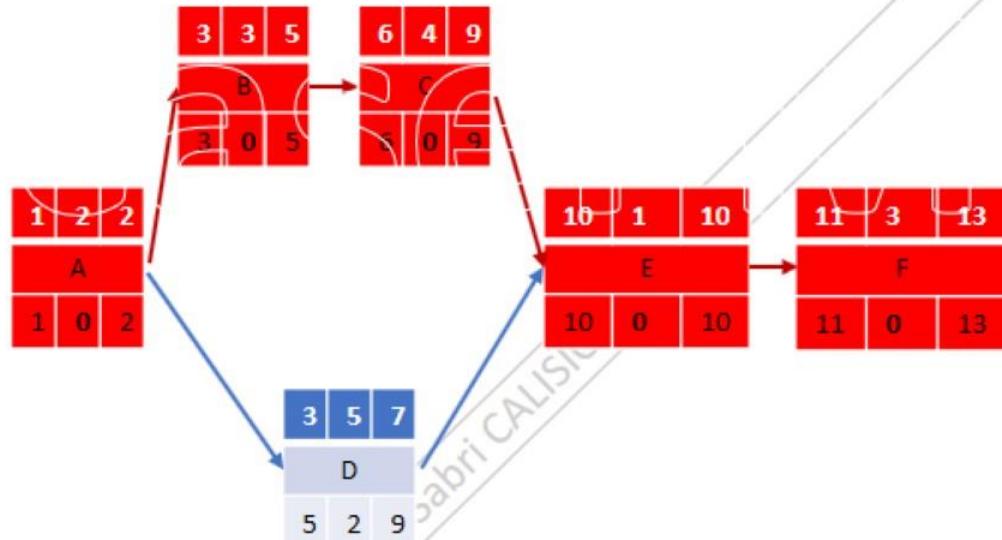


What happens if Activity D delays for 3 days?

SCHEDULE MANAGEMENT

Critical Path Method Calculations

Ex: Determine the critical path.



What happens if Activity D delays for 3 days?

- ➔ Complicated!
- ➔ Total duration = 14
- ➔ Float of Activity D = -1

SCHEDULE MANAGEMENT

Critical Path Method Calculations

Risk Assessment

Number of Critical Paths



Number of Near Critical Paths



Float



Number of Activities in Network Diagram

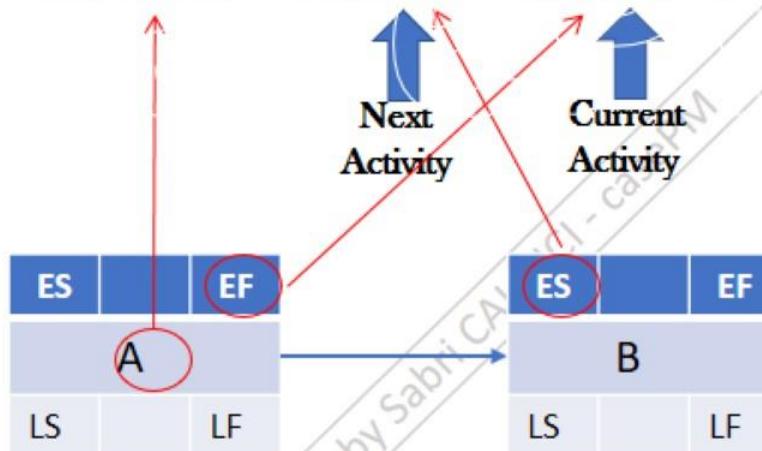


SCHEDULE MANAGEMENT

Critical Path Method Calculations

Total Float = LS - ES or LF - EF

Free Float = ES_(Successor) - EF_(Current) - 1

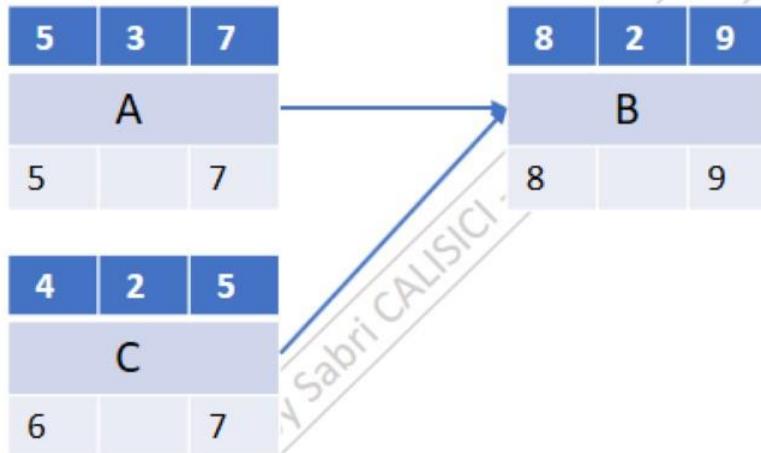


SCHEDULE MANAGEMENT

Critical Path Method Calculations

$$\text{Free Float} = \text{ES}_{(\text{Successor})} - \text{EF}_{(\text{Current})}$$

Ex 1: Calculate the Free Float of Activity A.

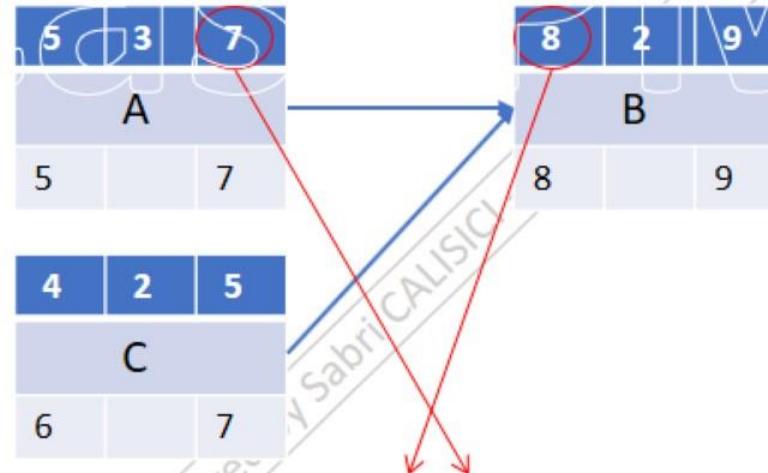


SCHEDULE MANAGEMENT

Critical Path Method Calculations

$$\text{Free Float} = \text{ES}_{(\text{Successor})} - \text{EF}_{(\text{Current})}$$

Ex 1: Calculate the Free Float of Activity A.



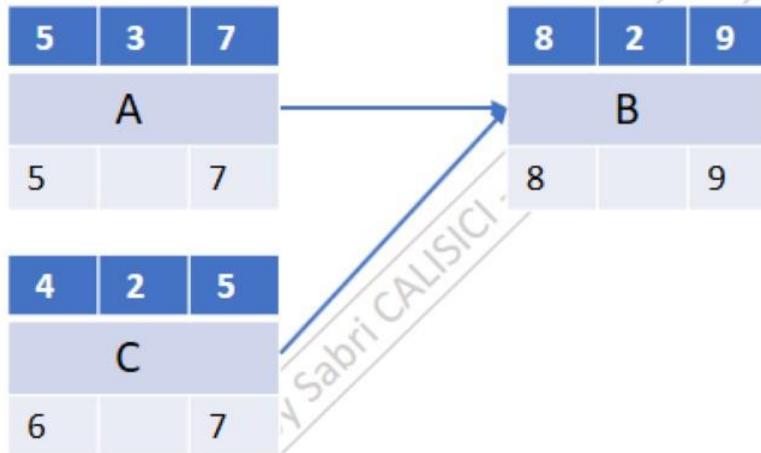
$$\text{Free Float of A: } 8 - 7 - 1 = 0$$

SCHEDULE MANAGEMENT

Critical Path Method Calculations

$$\text{Free Float} = \text{ES}_{(\text{Successor})} - \text{EF}_{(\text{Current})}$$

Ex 2: Calculate the Free Float of Activity C.

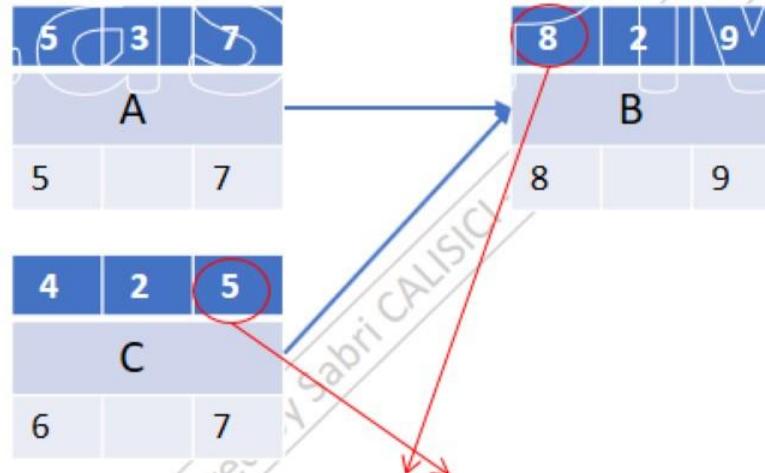


SCHEDULE MANAGEMENT

Critical Path Method Calculations

$$\text{Free Float} = \text{ES}_{(\text{Successor})} - \text{EF}_{(\text{Current})}$$

Ex 2: Calculate the Free Float of Activity C.



SCHEDULE MANAGEMENT

Develop Schedule / Schedule Compression

SCHEDULE MANAGEMENT

Develop Schedule / Schedule Compression

The Project Manager

- is responsible for presenting all of the Schedule options
- is the one who says «Yes, we can do» or «No, we can't do»

Develop
Schedule



Search for
Better options

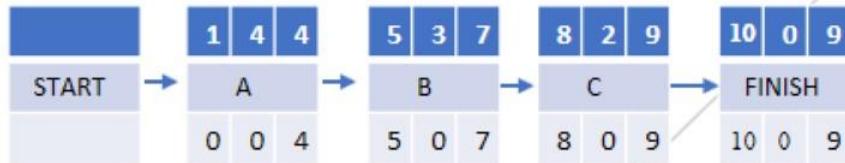
Two commonly used techniques to reduce the Project Duration:

- Fast Tracking
- Crashing

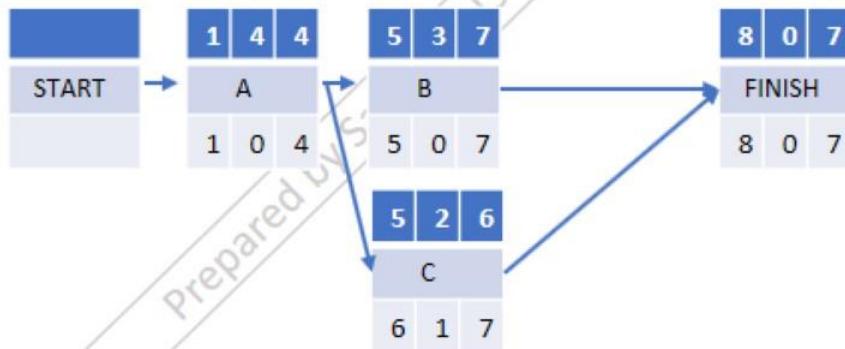
SCHEDULE MANAGEMENT

Develop Schedule / Schedule Compression

Fast Tracking



Project Duration is 9 days



Project Duration is 7 days

SCHEDULE MANAGEMENT

Develop Schedule / Schedule Compression

Fast Tracking

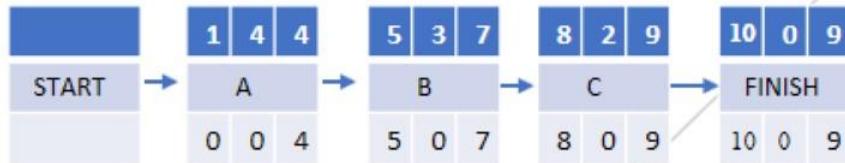
Disadvantages of Fast Tracking:

- Weak communication
- Re-work
- Increased Risk (ALWAYS!)
- Increased Cost (SOMETIMES)

SCHEDULE MANAGEMENT

Develop Schedule / Schedule Compression

Crashing



Resource of B: 1 Programmer

1 Programmer → 3 days

2 Programmers → 2 days



Duration: 8 days

SCHEDULE MANAGEMENT

Develop Schedule / Schedule Compression

Crashing

Disadvantages of Crashing:

- Increase the risk (**SOMETIMES**)
- Increase the cost (**ALWAYS!**)

Prepared by Sabri CALISICI - casePM

SCHEDULE MANAGEMENT

Develop Schedule / Schedule Compression

Which one should you choose?

Fast Tracking or Crashing

Choose the option that has
the minimum negative impact

Prepared by Sabri CALISIR - 22SepPM

SCHEDULE MANAGEMENT

Develop Schedule / Schedule Compression

What if we cannot Fast Track or Crash?

We have two more options:

- Reduce Scope
- Cut Quality

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SCHEDULE MANAGEMENT

Develop Schedule / Schedule Compression

Reduce Scope

By Reducing the Scope:

We can save cost

We can save time

We can save resources

CUSTOMER DISSATISFACTION!!!

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SCHEDULE MANAGEMENT

Develop Schedule / Schedule Compression

Cut Quality

By Cutting Quality:

We can save cost

We can save time

We can save resources

There is a possibility for the Risk to be increased
and the Customer to be dissatisfied!

SCHEDULE MANAGEMENT

Develop Schedule / Simulation

SCHEDULE MANAGEMENT

Develop Schedule / Simulation

SCHEDULE MANAGEMENT

Develop Schedule / Simulation

Simulation Techniques

- ➔ We use Simulation Techniques to see what happens if there is a change in one or more activity sources (resources, risks, etc.)
- ➔ Monte Carlo Analysis is an example

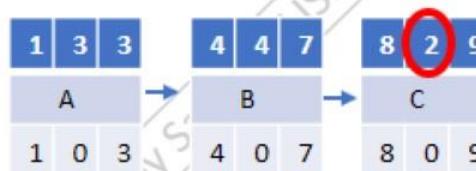
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SCHEDULE MANAGEMENT

Develop Schedule / Simulation

Monte Carlo Analysis (Monte Carlo Simulation)

Activities	Optimistic	Most Likely	Pessimistic
A	3	5	6
B	4	5	7
C	1	2	3



SCHEDULE MANAGEMENT

Develop Schedule / Simulation

Monte Carlo Analysis (Monte Carlo Simulation)

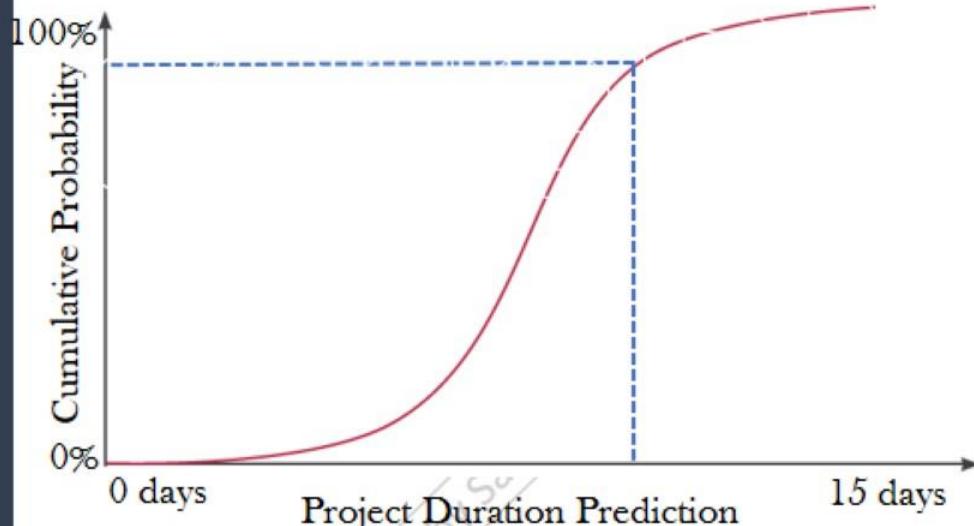
Activities	Possibilities					
	P1	P2	P3	P4	P10.000
A	3	3	3,5	5,1		6
B	4	4	4,1	7		7
C	1	2	1,5	1		3
Project Duration	8	9	9,1	13,1		16

Prepared by S.

SCHEDULE MANAGEMENT

Develop Schedule / Simulation

Monte Carlo Analysis (Monte Carlo Simulation)



Possibility of the Project to be completed in 10 days is %...

SCHEDULE MANAGEMENT

Develop Schedule / Simulation

Monte Carlo Analysis (Monte Carlo Simulation)

- Calculating the probabilities of the Project Duration
- Calculating the probabilities of the Project Cost
- Calculating an Activity's possibility of being in the Critical Path
- Calculating the Project Risk

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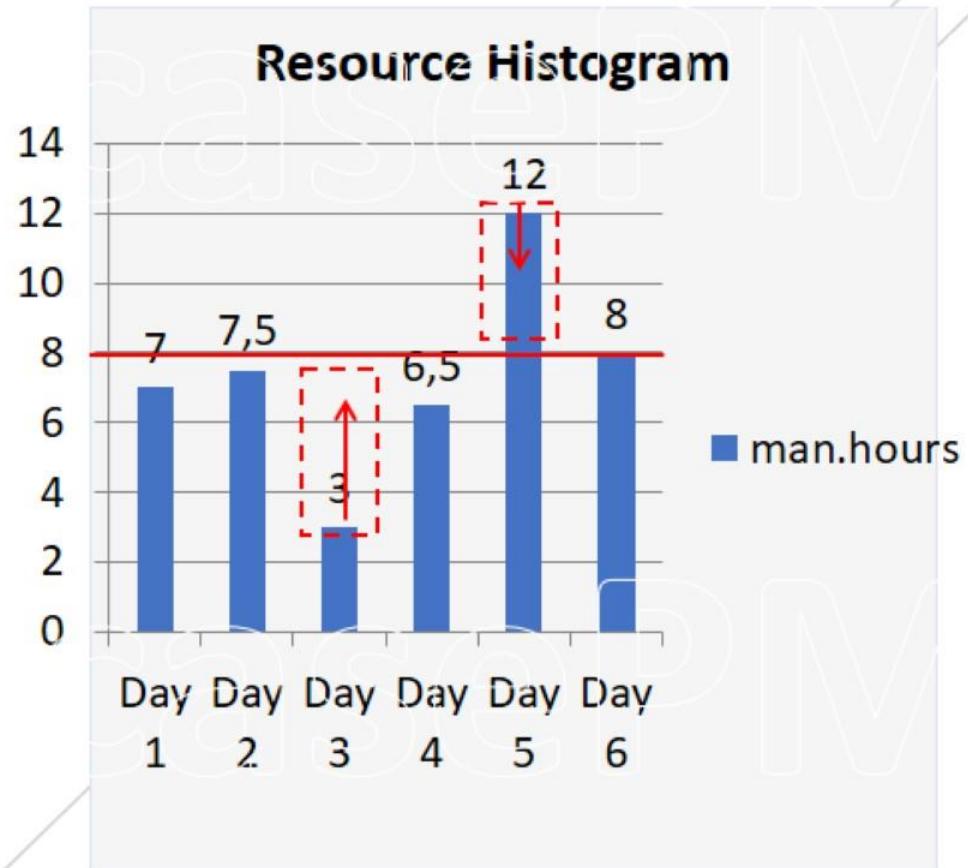
SCHEDULE MANAGEMENT

Develop Schedule / Resource Optimization

SCHEDULE MANAGEMENT

Develop Schedule / Resource Optimization

Resource Optimization



SCHEDULE MANAGEMENT

Develop Schedule / Resource Optimization

Resource Optimization

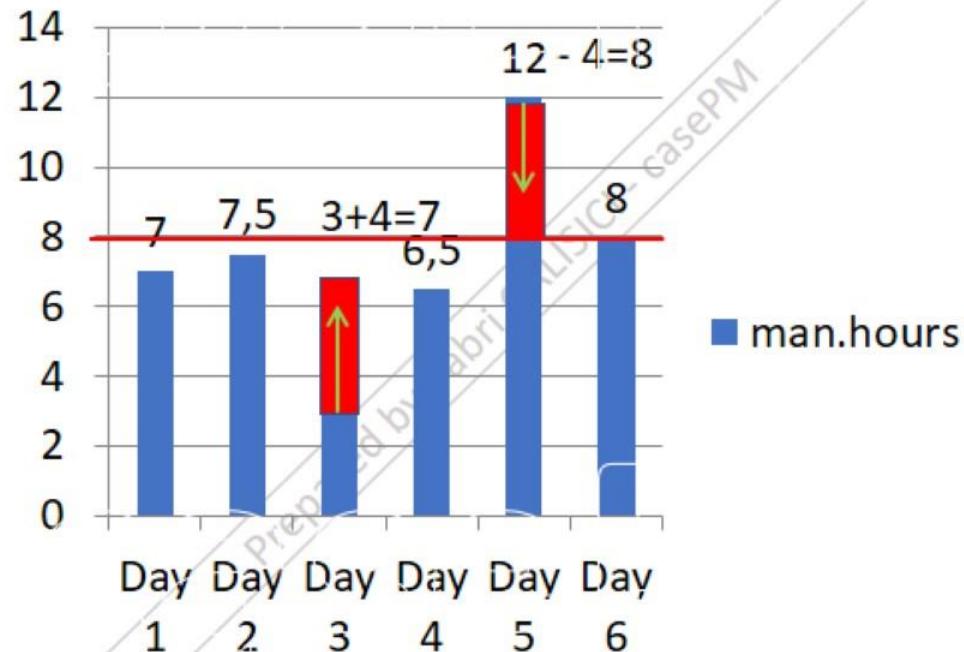
- Resource Leveling
- Resource Smoothing

Prepared by Sabri CALISICI - casePM

SCHEDULE MANAGEMENT

Develop Schedule / Resource Optimization

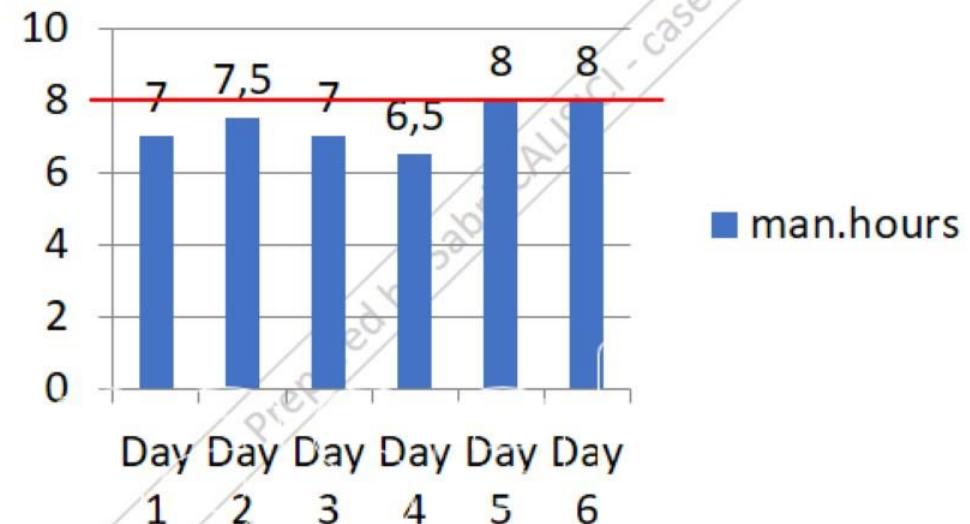
Resource Leveling



SCHEDULE MANAGEMENT

Develop Schedule / Resource Optimization

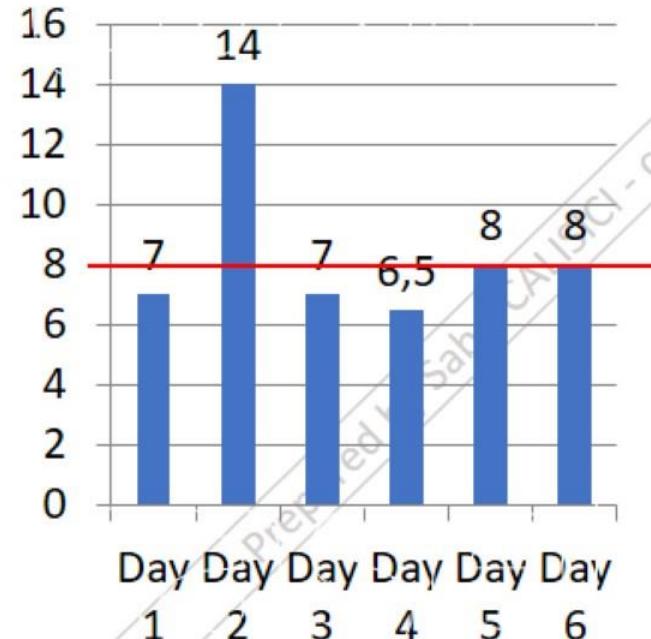
Resource Leveling



SCHEDULE MANAGEMENT

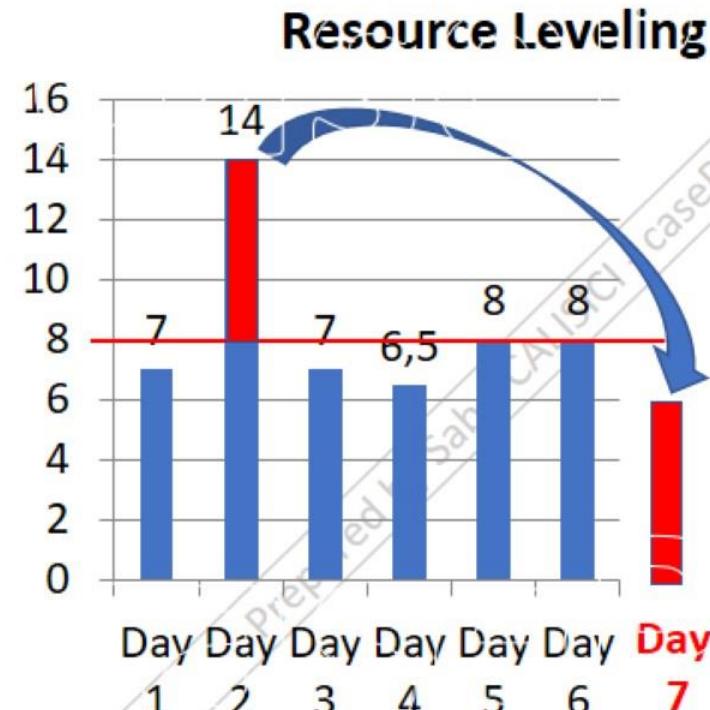
Develop Schedule / Resource Optimization

Resource Leveling



SCHEDULE MANAGEMENT

Develop Schedule / Resource Optimization

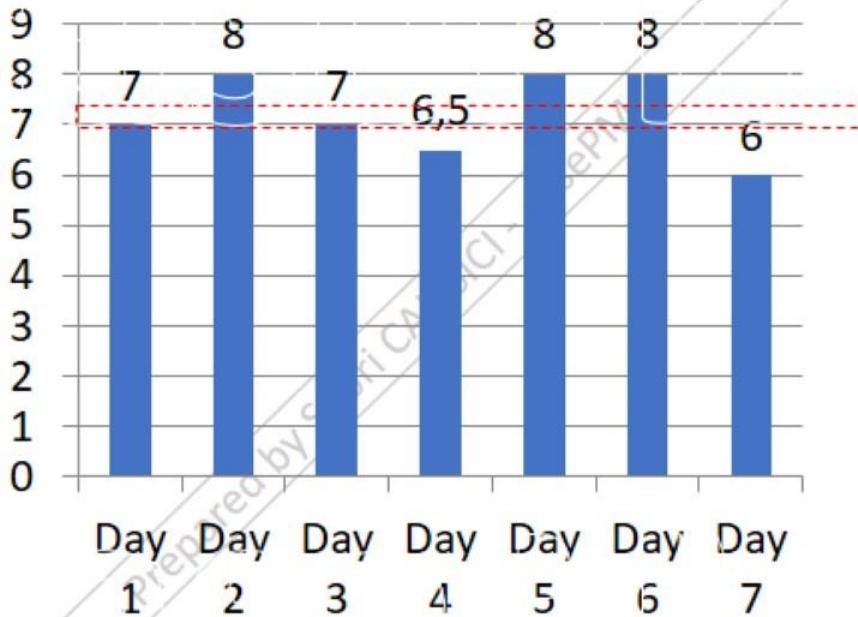


Resource Leveling may cause delays!
The primary purpose is decreasing the resource units below a constraint.

SCHEDULE MANAGEMENT

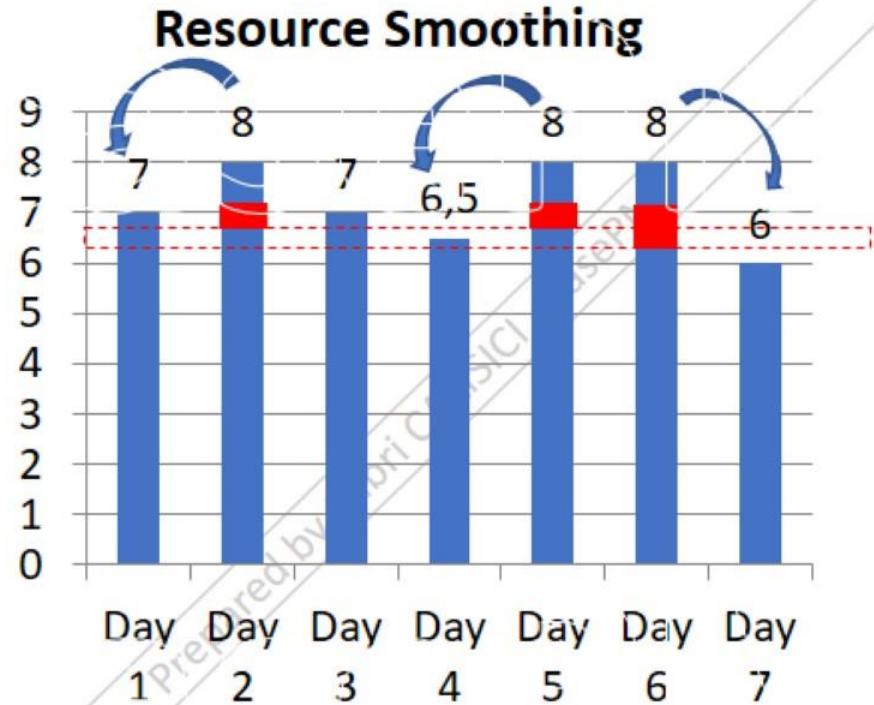
Develop Schedule / Resource Optimization

Resource Smoothing



SCHEDULE MANAGEMENT

Develop Schedule / Resource Optimization



Total duration is not changed!

SCHEDULE MANAGEMENT

Develop Schedule / Resource Optimization

Differences Between Resource Leveling and Resource Smoothing

Resource Leveling

Total duration may change

Primary objective is decreasing the resource units below a constraint.

Conducted first

Resource Smoothing

Total duration does not change

Primary objective is smoothing the resource units within a desired range.

Conducted after Resource Leveling

Develop Schedule Process

What Do We Need? What Do We Use? What Do We Get?

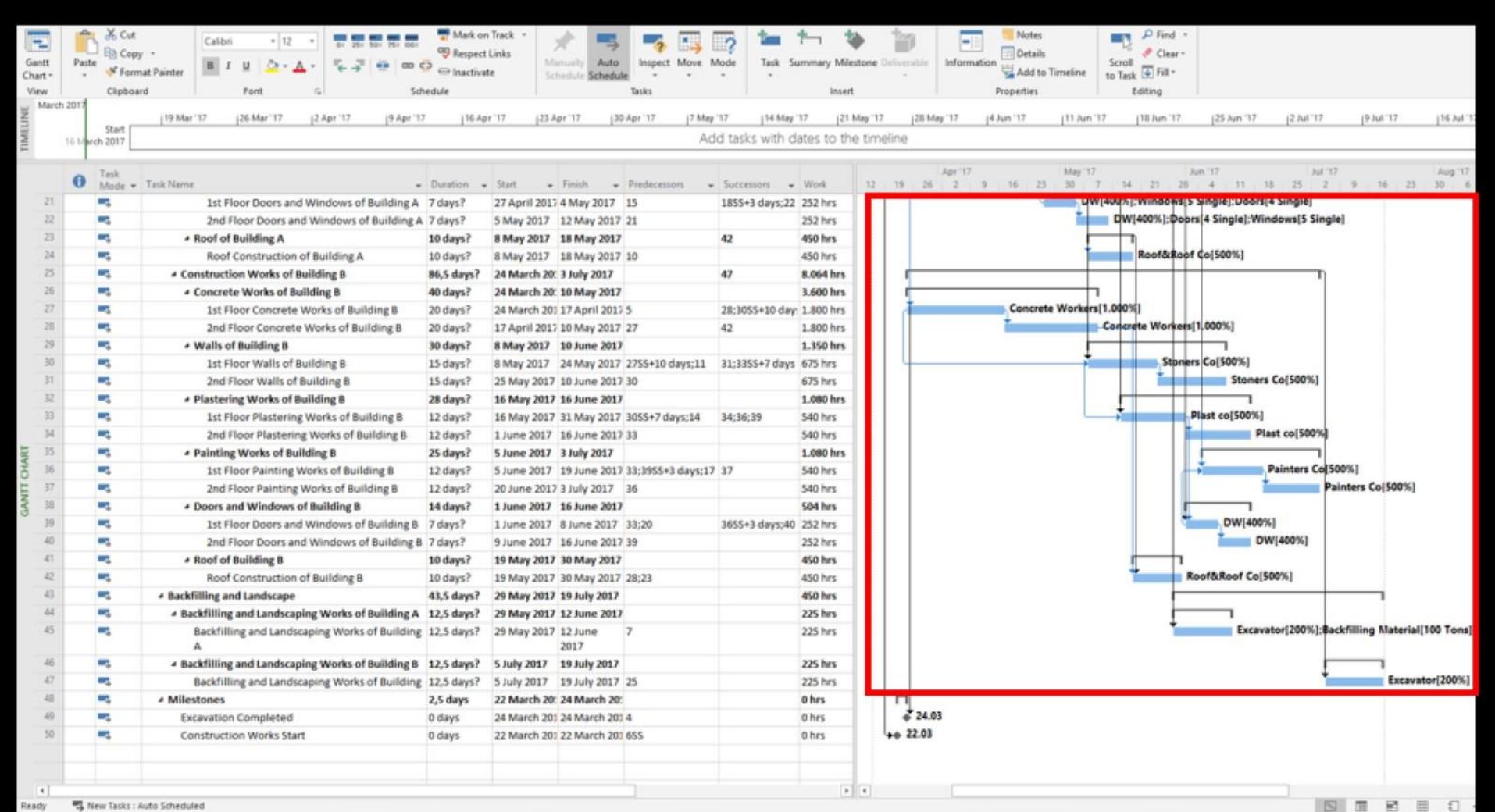
SCHEDULE MANAGEMENT

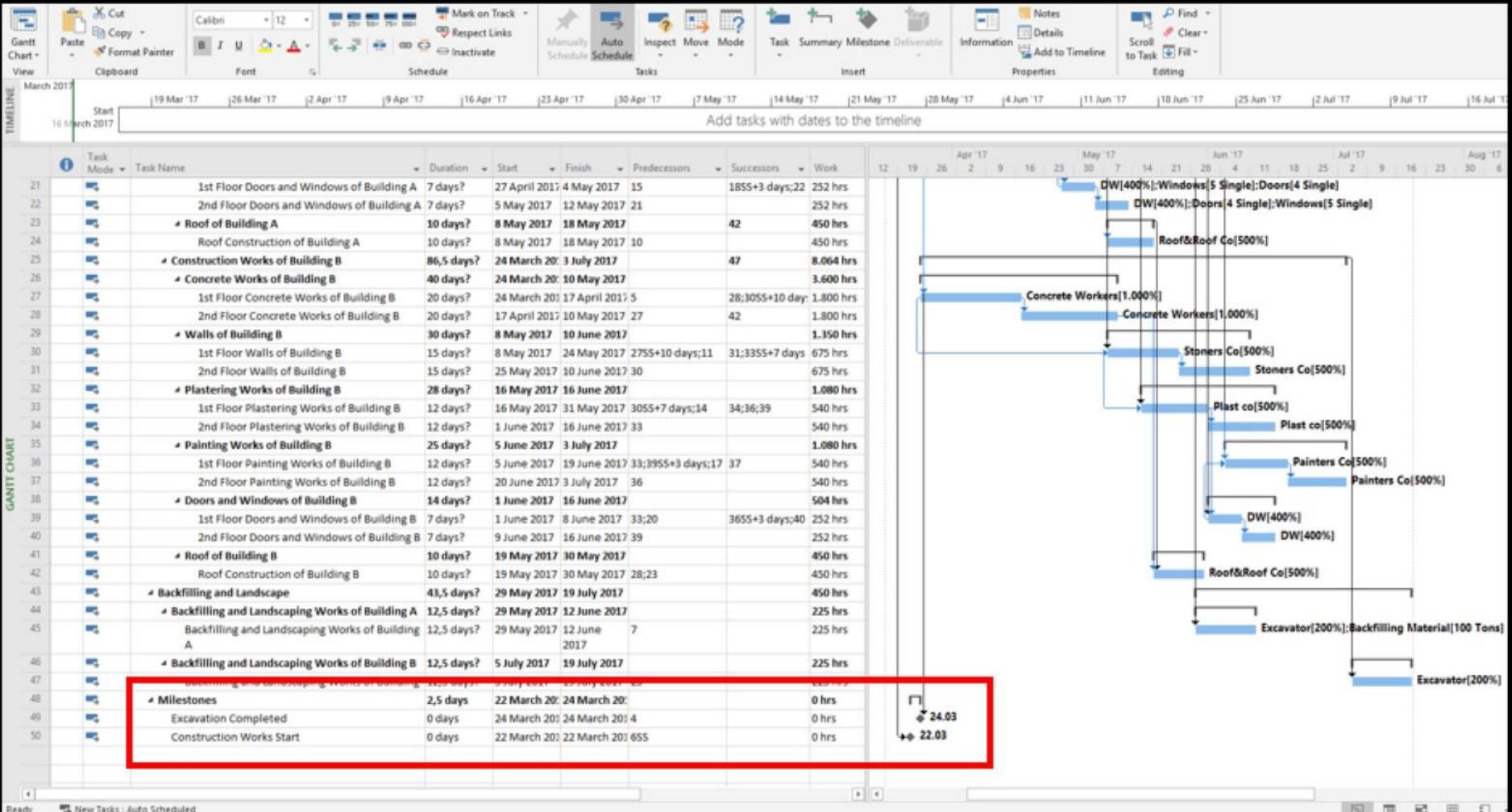
Develop Schedule

What do we get?

- Project Schedule including Schedule Network Diagrams, Bar Charts and Milestone Charts

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SCHEDULE MANAGEMENT

Develop Schedule

What do we get?

- Project Schedule including Schedule Network Diagrams, Bar Charts and Milestone Charts

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SCHEDULE MANAGEMENT

Develop Schedule

What do we get?

- Schedule Baseline

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SCHEDULE MANAGEMENT

Develop Schedule

What do we get?

- Schedule Data

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SCHEDULE MANAGEMENT

Develop Schedule

What do we get?

- Project Calendars

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SCHEDULE MANAGEMENT

Develop Schedule

What do we get?

- Change Requests

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SCHEDULE MANAGEMENT

Develop Schedule

What do we get?

- Revisions in:

- Schedule Management Plan
- Cost Baseline
- Resource Requirements
- Duration Estimates
- Activity Attributes
- Assumption Log
- Lessons Learned Register
- Risk Register

Project

Management Plan

Project Documents

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SCHEDULE MANAGEMENT

Develop Schedule

What do we need?

- Schedule Management Plan

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SCHEDULE MANAGEMENT

Develop Schedule

What do we need?

- Scope Baseline

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SCHEDULE MANAGEMENT

Develop Schedule

- Schedule Management Plan
- Scope Baseline

Project
Management
Plan

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SCHEDULE MANAGEMENT

Develop Schedule

What do we need?

- Activity Attributes & Activity List

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SCHEDULE MANAGEMENT

Develop Schedule

What do we need?

- Assumption Log

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SCHEDULE MANAGEMENT

Develop Schedule

What do we need?

- Duration Estimates

Prepared by Sabri CALISICI - casePM

SCHEDULE MANAGEMENT

Develop Schedule

What do we need?

- Basis of Estimates

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SCHEDULE MANAGEMENT

Develop Schedule

What do we need?

- Lessons Learned Register

Prepared by Sabri CALISICI - casePM

SCHEDULE MANAGEMENT

Develop Schedule

What do we need?

- Milestone List

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SCHEDULE MANAGEMENT

Develop Schedule

What do we need?

- Project Schedule Network Diagrams

Prepared by Sabri CALISICI - casePM

SCHEDULE MANAGEMENT

Develop Schedule

What do we need?

- Project Team Assignments

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SCHEDULE MANAGEMENT

Develop Schedule

What do we need?

- Resource Calendars

Prepared by Sabri CALISICI - casePM

SCHEDULE MANAGEMENT

Develop Schedule

What do we need?

- Resource Requirements

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SCHEDULE MANAGEMENT

Develop Schedule

What do we need?

- Risk Register

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SCHEDULE MANAGEMENT

Develop Schedule

- Activity Attributes
- Activity List
- Assumption Log
- Duration Estimates
- Basis of Estimates
- Lessons Learned Register
- Milestone List
- Project Schedule Network Diagrams
- Project Team Assignments
- Resource Calendars
- Resource Requirements
- Risk Register

**Project
Documents**

SCHEDULE MANAGEMENT

Develop Schedule

What do we need?

- Agreements

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SCHEDULE MANAGEMENT

Develop Schedule

What do we need?

- Enterprise Environmental Factors

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SCHEDULE MANAGEMENT

Develop Schedule

What do we need?

- Organizational Process Assets

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SCHEDULE MANAGEMENT

Develop Schedule

What do we use?

- Schedule Network Analysis

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SCHEDULE MANAGEMENT

Develop Schedule

What do we use?

- Critical Path Method

Prepared by Sabri CALISICI - casePM

SCHEDULE MANAGEMENT

Develop Schedule

What do we use?

- Resource Optimization

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SCHEDULE MANAGEMENT

Develop Schedule

What do we use?

- Data Analysis techniques like What-if Scenario Analysis, Simulation, and etc.

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SCHEDULE MANAGEMENT

Develop Schedule

What do we use?

- Leads and Lags

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SCHEDULE MANAGEMENT

Develop Schedule

What do we use?

- Schedule Compression

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SCHEDULE MANAGEMENT

Develop Schedule

What do we use?

What-if Scenario Analysis

Scenario A → Schedule calculations → Results A

Scenario B → Schedule calculations → Results B

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SCHEDULE MANAGEMENT

Develop Schedule

What do we use?

- Project Management Information System

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SCHEDULE MANAGEMENT

Develop Schedule

What do we use?

- Project Management Information System

ex: IOS Application

- Feasibility
 - Initiation
 - Release plan
 - Release
 - 1st Iteration
 - 2nd Iteration
 - 3rd Iteration
 -
 - Close-out
-
- The diagram illustrates the iterative nature of the 'Release' phase. A blue rectangular box encloses the 'Release' step. Inside this box, a vertical list shows four iterations: '1st Iteration', '2nd Iteration', '3rd Iteration', and an ellipsis '.....'. An arrow originates from the right side of the 'Release' box and points towards the word 'Features' located to its right.

Features

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SCHEDULE MANAGEMENT

Develop Schedule

What do we use?

- Agile Release Planning

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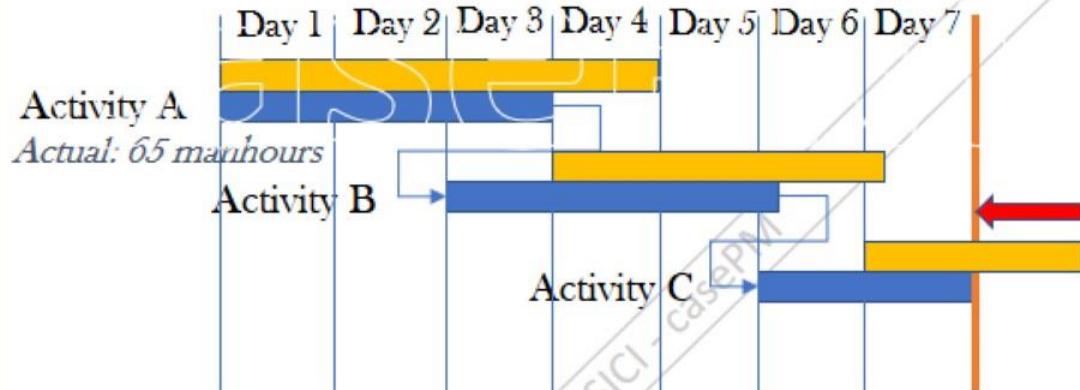
SCHEDULE MANAGEMENT

Control Schedule

SCHEDULE MANAGEMENT

Control Schedule

Control Schedule Process



- Schedule Management Plan will guide us!
- Get the Work Performance Data
- Enter the Data to the PMIS
- Critical Path Method calculations
- Data Analysis (Earned Value Analysis, Performance Reviews, Iteration Burndown Chart, etc.)
- Use the Resource Optimization and Schedule Compression techniques to fix the situation
- We may need to update the Project Management Plan and the Project Documents (**Change Request is needed to change the Project Management Plan!!!**)

Control Schedule Process

What Do We Need? What Do We Use? What Do We Get?

SCHEDULE MANAGEMENT

Control Schedule

What do we get?

- Work Performance Information

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SCHEDULE MANAGEMENT

Control Schedule

What do we get?

- Schedule Forecasts

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SCHEDULE MANAGEMENT

Control Schedule

What do we get?

- Change Requests

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SCHEDULE MANAGEMENT

Control Schedule

What do we get?

- Revisions in:

- Schedule Management Plan
- Schedule Baseline
- Cost Baseline
- Performance Measurement Baseline

Project
Management
Plan

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SCHEDULE MANAGEMENT

Control Schedule

What do we get?

- Basis of Estimates

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SCHEDULE MANAGEMENT

Control Schedule

What do we get?

- Resource Calendars

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SCHEDULE MANAGEMENT

Control Schedule

What do we get?

- Project Schedule & Schedule Data

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SCHEDULE MANAGEMENT

Control Schedule

What do we get?

- Risk Register

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SCHEDULE MANAGEMENT

Control Schedule

What do we get?

- Lessons Learned Register

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SCHEDULE MANAGEMENT

Control Schedule

- Assumption Log
- Basis of Estimates
- Resource Calendars
- Project Schedule
- Schedule Data
- Risk Register
- Lessons Learned Register

Project
Documents

SCHEDULE MANAGEMENT

Control Schedule

What do we need?

- Schedule Management Plan

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SCHEDULE MANAGEMENT

Control Schedule

What do we need?

- Schedule Baseline

Prepared by Sabri CALISICI - casePM

SCHEDULE MANAGEMENT

Control Schedule

What do we need?

- Scope Baseline

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SCHEDULE MANAGEMENT

Control Schedule

What do we need?

- Performance Measurement Baseline

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SCHEDULE MANAGEMENT

Control Schedule

- Schedule Management Plan
 - Schedule Baseline
 - Scope Baseline
 - Performance Measurement Baseline
- 
- Project
Management
Plan

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SCHEDULE MANAGEMENT

Control Schedule

What do we need?

- Lessons Learned Register

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SCHEDULE MANAGEMENT

Control Schedule

What do we need?

- Project Calendars & Resource Calendars

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SCHEDULE MANAGEMENT

Control Schedule

What do we need?

- Project Schedule & Schedule Data

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SCHEDULE MANAGEMENT

Control Schedule

- Lessons Learned Register
- Project Calendars
- Resource Calendars
- Project Schedule
- Schedule Data

Project
Documents

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SCHEDULE MANAGEMENT

Control Schedule

What do we need?

- Work Performance Data

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SCHEDULE MANAGEMENT

Control Schedule

What do we need?

- Organizational Process Assets

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SCHEDULE MANAGEMENT

Control Schedule

What do we use?

- Data Analysis techniques like Earned Value Analysis, Performance Reviews, Trend Analysis, Variance Analysis, What-if Scenario Analysis, Iteration Burndown Chart, and etc.

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SCHEDULE MANAGEMENT

Control Schedule

What do we use?

- Data Analysis techniques like Earned Value Analysis, Performance Reviews, Trend Analysis, **Variance Analysis**, What-if Scenario Analysis, Iteration Burndown Chart, and etc.

Ex: Assume the deadline for the Phase A of the project is 10th of April. Let's say we have completed this phase at 15th of April.

- ➔ Variance = 5 days
- ➔ Reasons:

- ➔ Reason 1:
- ➔ Reason 2:
- ➔ .
- ➔ .
- ➔ .

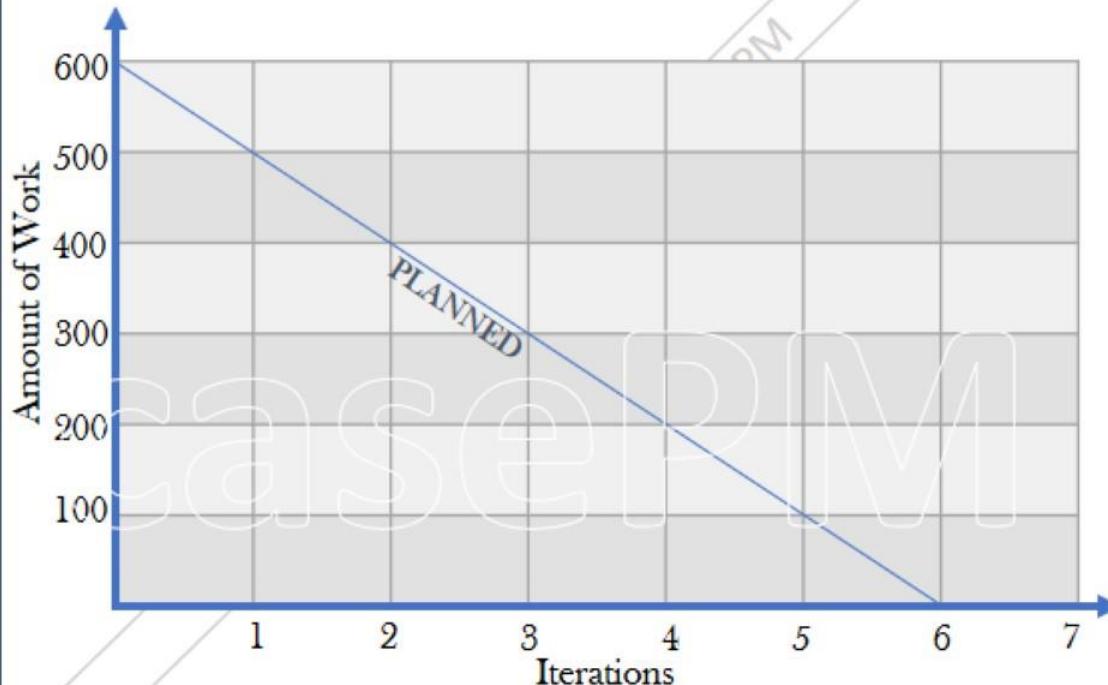
Corrective Action?
or
Preventive Action?

SCHEDULE MANAGEMENT

Control Schedule

What do we use?

- Data Analysis techniques like Earned Value Analysis, Performance Reviews, Trend Analysis, Variance Analysis, What-if Scenario Analysis, **Iteration Burndown Chart**, and etc.

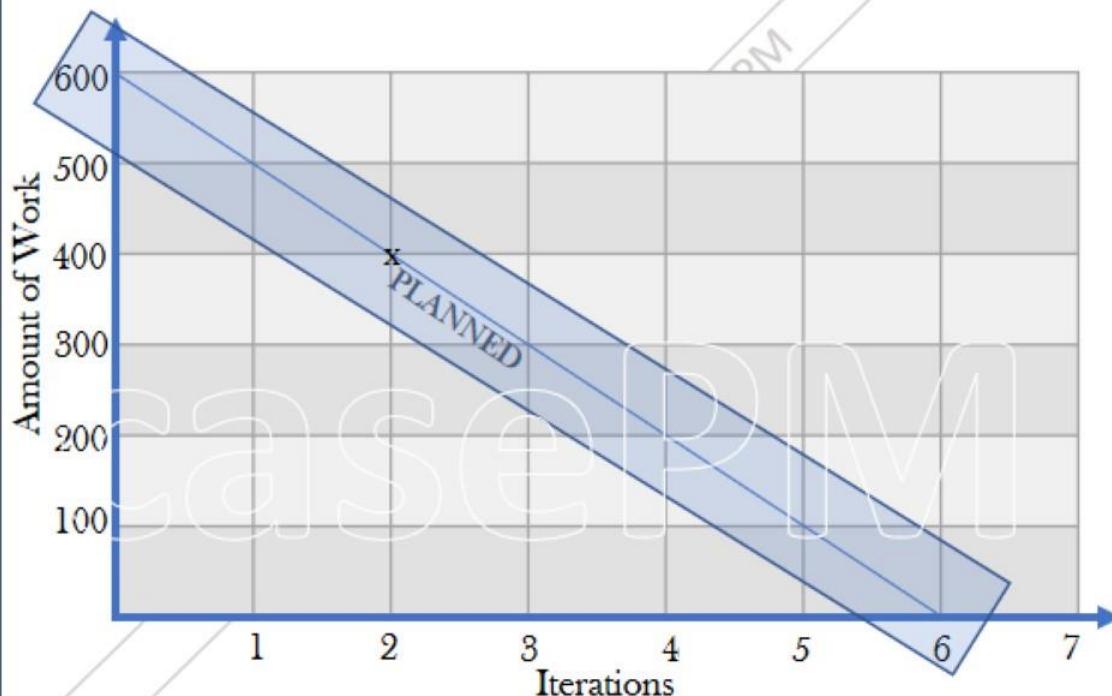


SCHEDULE MANAGEMENT

Control Schedule

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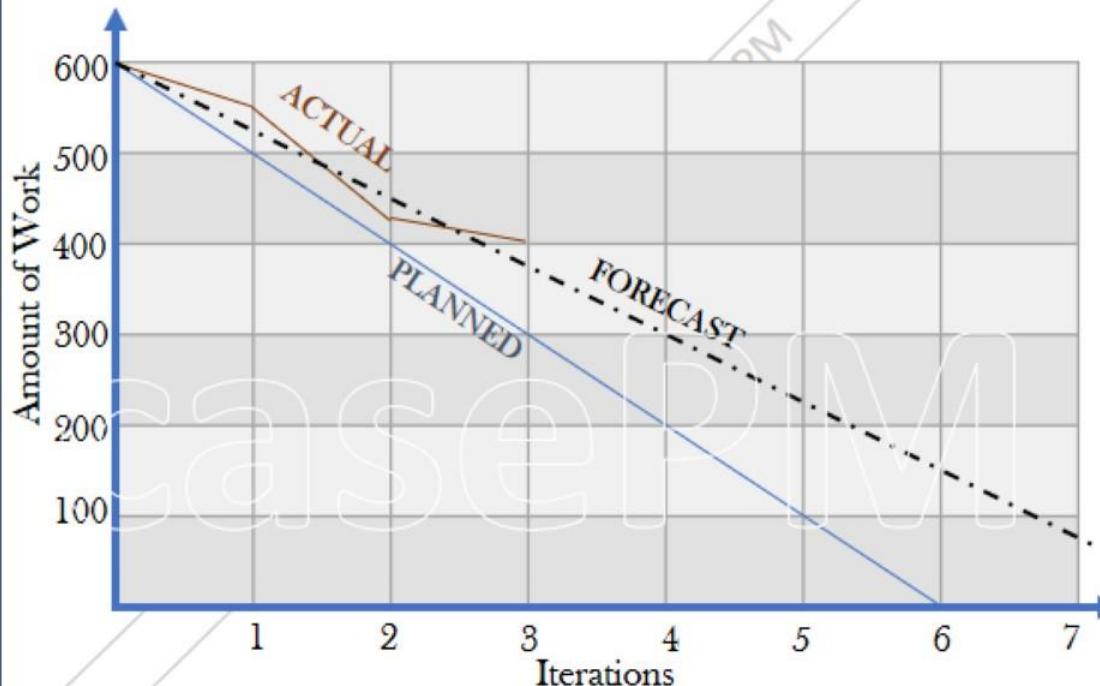


SCHEDULE MANAGEMENT

Control Schedule

What do we use?

- Data Analysis techniques like Earned Value Analysis, Performance Reviews, Trend Analysis, Variance Analysis, What-if Scenario Analysis, **Iteration Burndown Chart**, and etc.



SCHEDULE MANAGEMENT

Control Schedule

What do we use?

- Critical Path Method

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SCHEDULE MANAGEMENT

Control Schedule

What do we use?

- Project Management Information System

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SCHEDULE MANAGEMENT

Control Schedule

What do we use?

- Resource Optimization
- Leads and Lags
- Schedule Compression

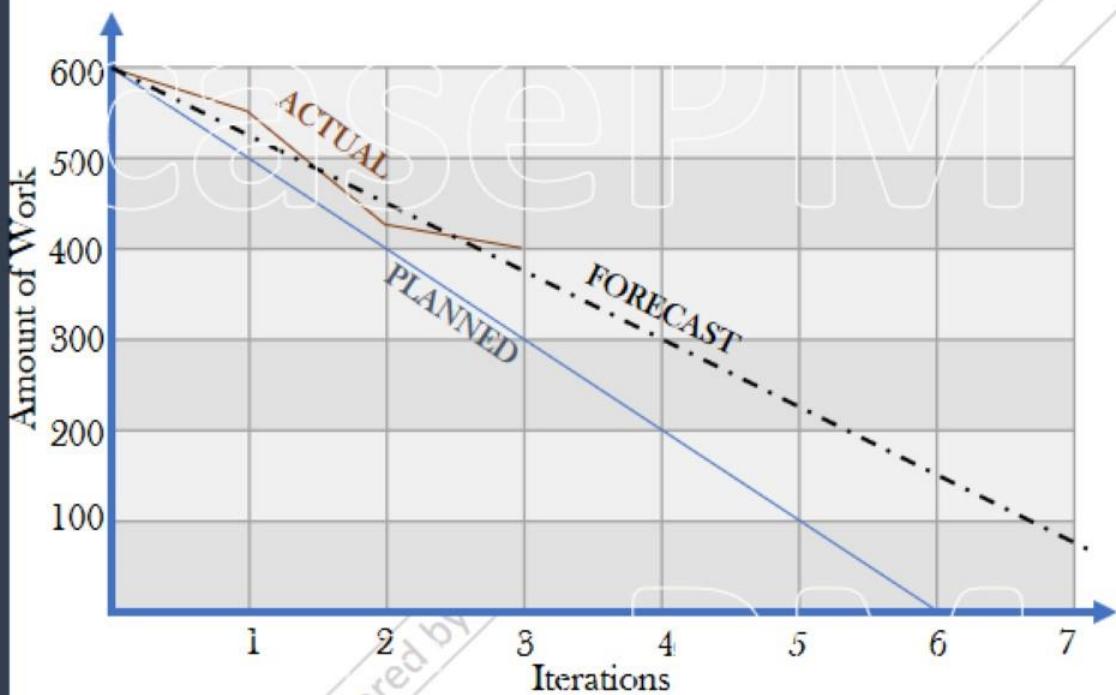
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SCHEDULE MANAGEMENT

Agile Considerations

SCHEDULE MANAGEMENT

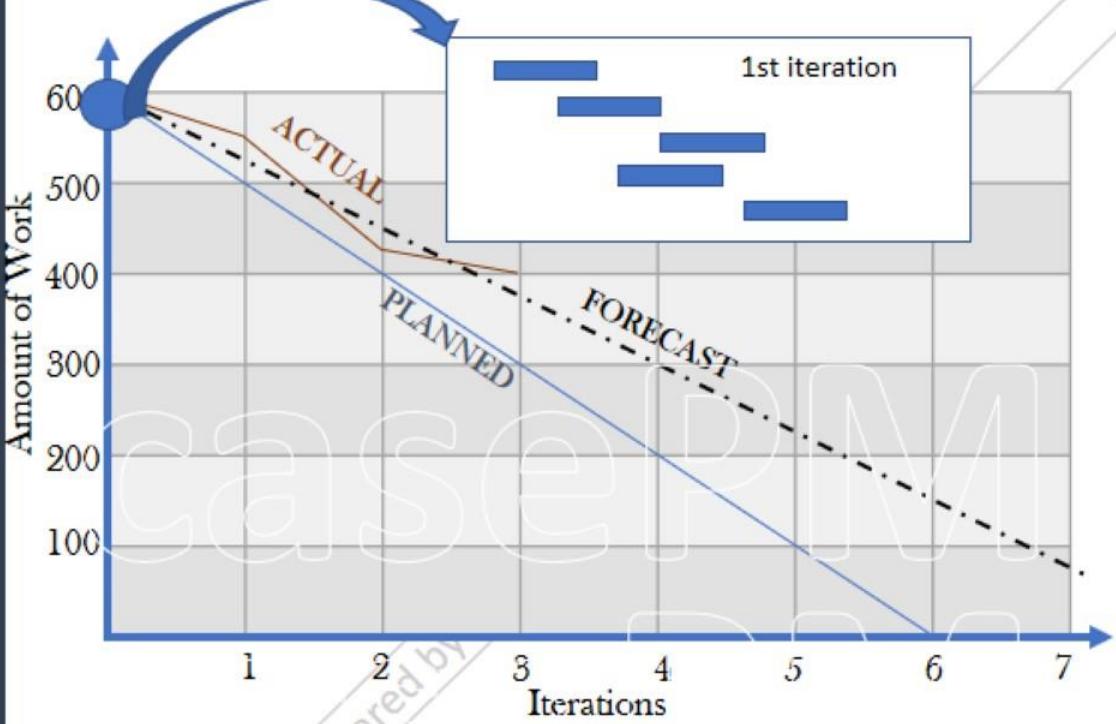
Agile Considerations



- Short cycles: Plan&Execute - Plan&Execute -

SCHEDULE MANAGEMENT

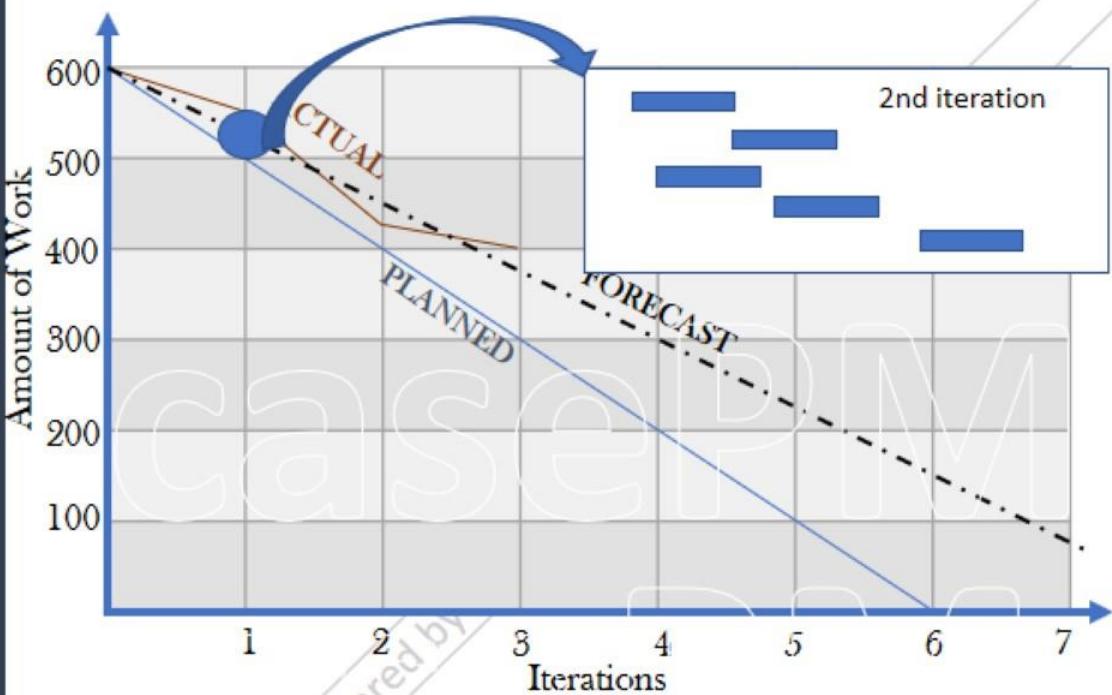
Agile Considerations



- Short cycles: Plan&Execute - Plan&Execute -

SCHEDULE MANAGEMENT

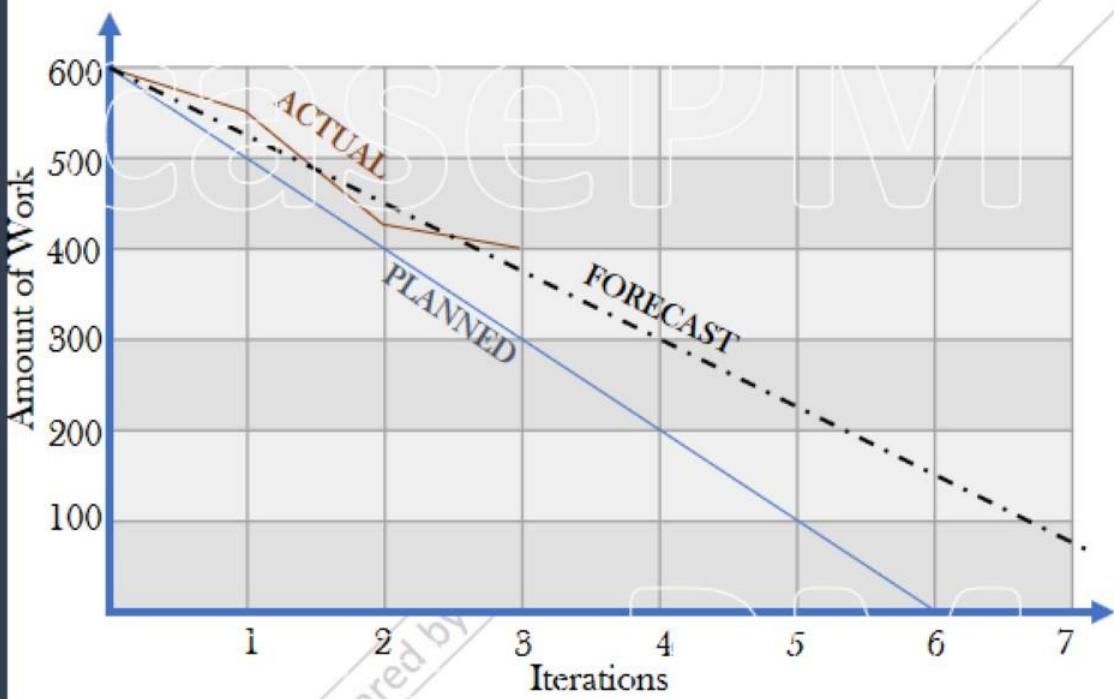
Agile Considerations



- Short cycles: Plan&Execute - Plan&Execute -

SCHEDULE MANAGEMENT

Agile Considerations



- Short cycles: Plan&Execute - Plan&Execute -
- The released products are useable
- Provides rapid feedback
- Changes are welcome
- The role of the Project Manager is similar

SCHEDULE MANAGEMENT

Tailoring Schedule Management

SCHEDULE MANAGEMENT

Tailoring Schedule Management

Tailoring Considerations

While tailoring the Schedule Management processes,

- We need to consider the life cycle approach we plan to use
- We need to consider the available resources and their efficiencies
- We need to consider the dimensions of the Project
- We need to consider the available technology to be used

Prepared by Sabri ALISH - caseP