Introduction:

Project management is the application of processes, methods, skills, knowledge and experience to achieve specific project objectives according to the project acceptance criteria within agreed parameters. Project management has final deliverables that are constrained to a finite timescale and budget.

Microsoft EPM is an enterprise wide solution for project management. As a platform for planning, information, and communication that spans multiple projects and departments, it enables we to better plan and supervise projects; centralize the management of resources; and perform sophisticated reporting.

Microsoft Project (MSP) 2016 is a project management software made for project managers so they can control their projects. Depending on the project plan, Microsoft Project lets us plan projects, assign tasks, manage resources, make reports and more.

Scheduling in Project Management: In project management, the project schedule is a document that, if properly prepared, is usable for planning, execution, monitoring/controlling, and communicating the delivery of the scope to the stakeholders. The main purpose of project scheduling is to represent the plan to deliver the project scope over time.

- Plan schedule management.
- Define project activities.
- Sequence activities.
- Estimate resources.
- Estimate durations.
- Develop the project schedule.

Constraints: 3 Constraints are

1. **Time constraint**: The time constraint refers to the project's schedule for completion, including the deadlines for each phase of the project, as well as the date for rollout of the final deliverable.
2. **Scope constraint**: The scope of a project defines its specific goals, deliverables, features and functions, in addition to the tasks required to complete the project.
3. **Cost constraint**: The cost of the project, often dubbed the project's budget, comprises all of the financial resources needed to complete the project on time, in its predetermined scope. Cost does not just mean money for materials — it encompasses costs for labor, vendors, quality control and other factors, as well.

Deadlines: Deadlines do have some benefits associated with them. These deadlines ensure that projects remain on schedule. They keep workers motivated to complete tasks. They also keep the business growing and moving forward, so that everyone in the company benefits from them.

Critical Path: The critical path (or paths) is the longest path (in time) from Start to Finish; it indicates the minimum time necessary to complete the entire project.

How to use MS Project to create Project Plan:

1. **Create a work breakdown structure**
   Create a work breakdown structure to represent the sequence of tasks in a project. The work breakdown structure includes tasks, requirements for each task, and revenue and cost information. Create a Task List

2. Create Timeline in MS Project-
    a. Add Start and Finish Dates to Each Task
    b. Add Tasks to the Timeline

3. Set Up Resources in Microsoft Project-
    a. Open the Resource Sheet and Add Resources
4. Assign Tasks in Microsoft Project- Once a list of resources for project is available assign tasks
    a. Switch to the Gantt chart
    b. Open the Task Form
    c. Select a Task to Assign
    Repeat steps to assign all the tasks.

With MS Project 2016 tasks can be scheduled manually or automatically. Automatic scheduling, Project will schedule tasks based on dependencies, calendars, and constraints among other things. The default option when creating tasks is to schedule them manually.

5. Create Task Dependencies in MS Project-

Dependencies occur when one task can't move on to the next phase until a particular task is completed before it. Creating dependencies involves linking tasks in the Gantt chart view. In Microsoft Project, we can link any two tasks. Once tasks are linked, every change made to the predecessor affects the successor
    a. Switch to Gantt Chart View
    b. Select Tasks to Link

Automatic Level: Clear the checkbox. When this check box is cleared, the Project only level assignments that are new or unleveled. This check box is selected by default, but in automatic leveling, the selection may significantly slow down the work in the plan because all tasks are leveled.

Schedule Optimization: Schedule optimization is the process of making sure each individual task or action in a schedule is aligned with the ultimate goal. Delivery companies often use schedule optimization to make sure a delivery route is laid out with the least possible mileage (and thus lowest fuel cost)

Baseline: A baseline is a group of nearly 20 primary reference points (in five categories: start dates, finish dates, durations, work, and cost estimates) that can be set to record the original project plan when that plan is completed and refined.

Set a baseline for the project
1. Open the project for editing.
2. Go to Schedule in the Quick Launch, then on the Task tab, in the Editing group, click Set Baseline, and then click the numbered baseline we want to use for the current project data.

Track the Progress of MS Project
With Microsoft Project, we can keep an eye on tasks to see if things are running on time or behind schedule. This will be easy to view as long as we keep the status of tasks updated during the length of the project.
    a. Mark Tasks That Are on Track

b. Use Predetermined Percentages to Track Tasks : To the left of the *Mark on Track* option, there are percentages that we can use to denote the progress of a task. Click a task to update and click 0%,25%, 50%, 75%, or 100%.

c. Update Tasks: Sometimes tasks fall behind or get accomplished ahead of schedule. Can use the *Update Task* option to update the status. Click the down arrow next to *Mark on Track* and click *Update Tasks.*

Reporting and Communication Information in MS Project

Creating custom reports in MS Project:
1. Click the Report tab.
2. In the View Reports group, click the type of report we want and then pick a specific report. For example, to open the Project Overview report, click Report > Dashboards > Project Overview.
3. The Project Overview report combines graphs and tables to show where each phase of the project stands, upcoming milestones, and tasks that are past their due dates.
   MS Project can be used to create multiple reports with the different date, can change the data in a report, create how a report looks, make our own report

Share Report:
1. In the project, click Group members in the top right corner.
2. Type the name we want to give to our project, and then click Next.
3. On the Group screen, we can either choose to create a new group for the project

Earned Value Analysis implementation in MS-Project File

Earned Value Analysis (EVA) is a tool for controlling the project progress. Key performance indicators (KPI) delineate the current schedule and cost situation. Earned value management (EVM) and earned value project/performance management (EVPM) are synonymous terms for EVA.

Multiple Projects in MS Project: Microsoft Project also allows project managers to work on multiple projects on the same platform, making it easier to deal with different projects in the same company or team.

Collaboration in MS Project:Team members can: Add information about project issues and risks. Store and work on project documents. Link issues, risks, and documents to specific tasks.

My Experience with eLearning for the MS Project 2016: This course has been really useful in understanding the concept in detail. The content is adequately designed for the learners with different experience. The short videos covering different topic gave flexibility to revisit the single topic if required additional focus. The detailed explanation and the UI of the course helped in simultaneously using/navigating the MS Project 2016, which helped in understanding each tool and their utility better.

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Course Enrolled: Microsoft Project 2016
Purpose: To earn PDUs for PMP Certification renewal