Project Planning

Project Management Plan

- Describe the management of the project
 - Milestones and deliverables of project
  - Risks and mitigation strategies

Interim Deliverables

- Break a project down into sub-projects
- Define interim deliverables around objectives or goals
- Also regarded as project milestones

Project Management Life Cycle

- Traditional
- Incremental planning
- Iterative planning
- Adaptive planning
- Extreme Planning

Project Management Life Cycle
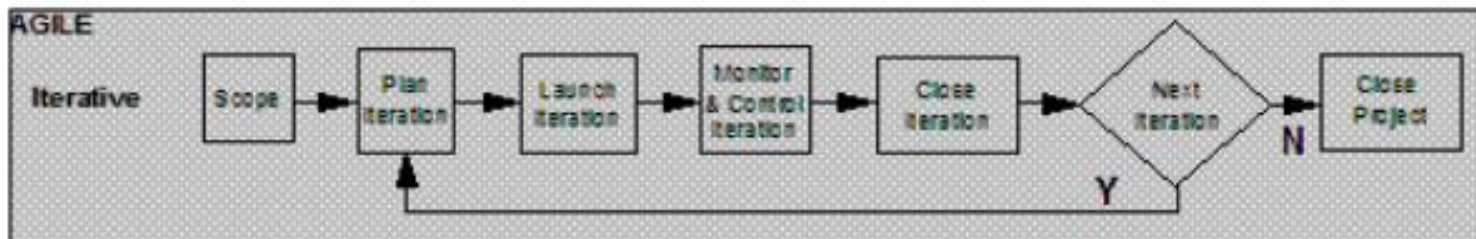
Plan the Project

- **Identify work to be done and estimate time, cost and resource requirements**
  - Define all of the work of project (WBS)
  - Estimate how long it will take to complete these works
  - Sequencing the work and building initial project schedule
  - Estimate the resources required to complete them
  - Writing risk management plan

Work Breakdown Structure

▶ Defines each activity required to complete the project

▶ Hierarchical description of all the work that must be done to complete the proposed project.

▶ Key to writing good WBS:

  ▶ Decompose project goal into major activities

  ▶ Keep breaking those activities down until you get to the smallest level of tasks mentioned earlier

  ▶ Caution: A WBS with too much detail is time consuming while WBS with not enough details will lead to lossing of important tasks

Work Breakdown Structure
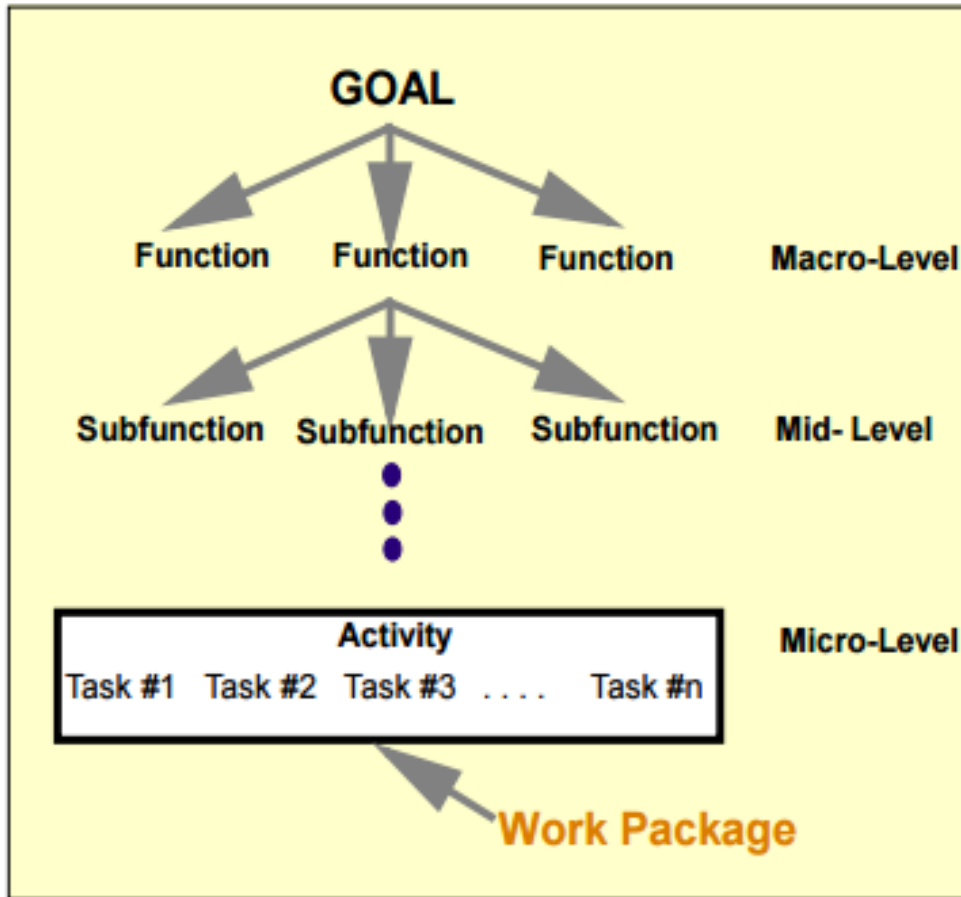
Function of WBS:
1) Estimate duration
2) Determine resources
3) Schedule work

Work Breakdown Structure Representation

▶ Different types of WBS representation

- ▶ Outline view

- ▶ Hierarchical structure

- ▶ Tabular view

- ▶ Structure view

Outline View

1. Web development platform

    1.1 Initiation

        1.1.1 Develop Project Charter

        1.1.2 Develop System Vision Document

        1.1.3 Develop Project Proposal

    1.2 Planning

    1.3 Interface Design

Hierarchical Structure

Level	WBS Code	Element Name
1	1	Web Development Platform
2	1.1	Initiation
3	1.1.1	Develop Project Charter
3	1.1.2	Develop System Vision Document
3	1.1.3	Develop Project Proposal
2	1.2	Planning
2	1.3	Interface Design

Tabular View

Level 1	Level 2	Level 3
1 Web Development Platform	1.1 Initiation	1.1.1 Develop Project Charter 1.1.2 Develop System Vision Document 1.1.3 Develop Project Proposal
	1.2 Planning	1.2.1 1.2.2 1.2.3
	1.3 Interface Design	1.3.1 1.3.2 1.3.3

Structure View
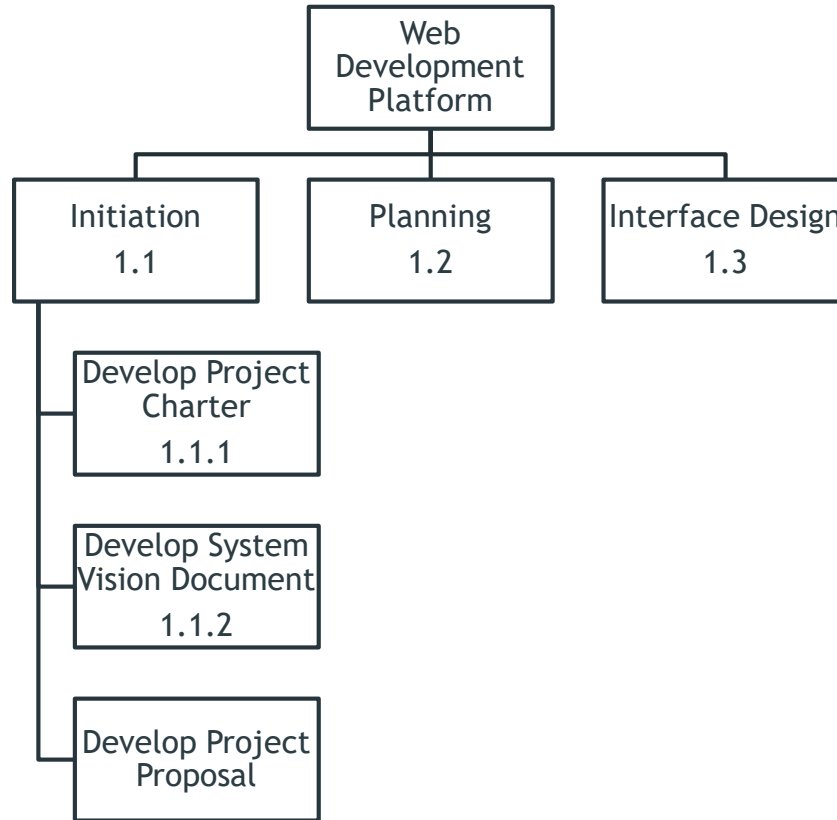
Timelines

- Two types of timeline schedule
  - Calendar schedule: absolute time intervals based on actual time
    - Example: July 2017
  - Relative schedule: measured from the start of the project or based on some other key event
    - 1 month after Interface Design

Gantt Chart

- Illustrates project schedule

- Series of horizontal lines shows the amount of work done or production completed in certain periods of time in relation to the amount planned

- Bars represent each task or activity

- Length of each bar represent the relative length of the task

Example of Gantt Chart
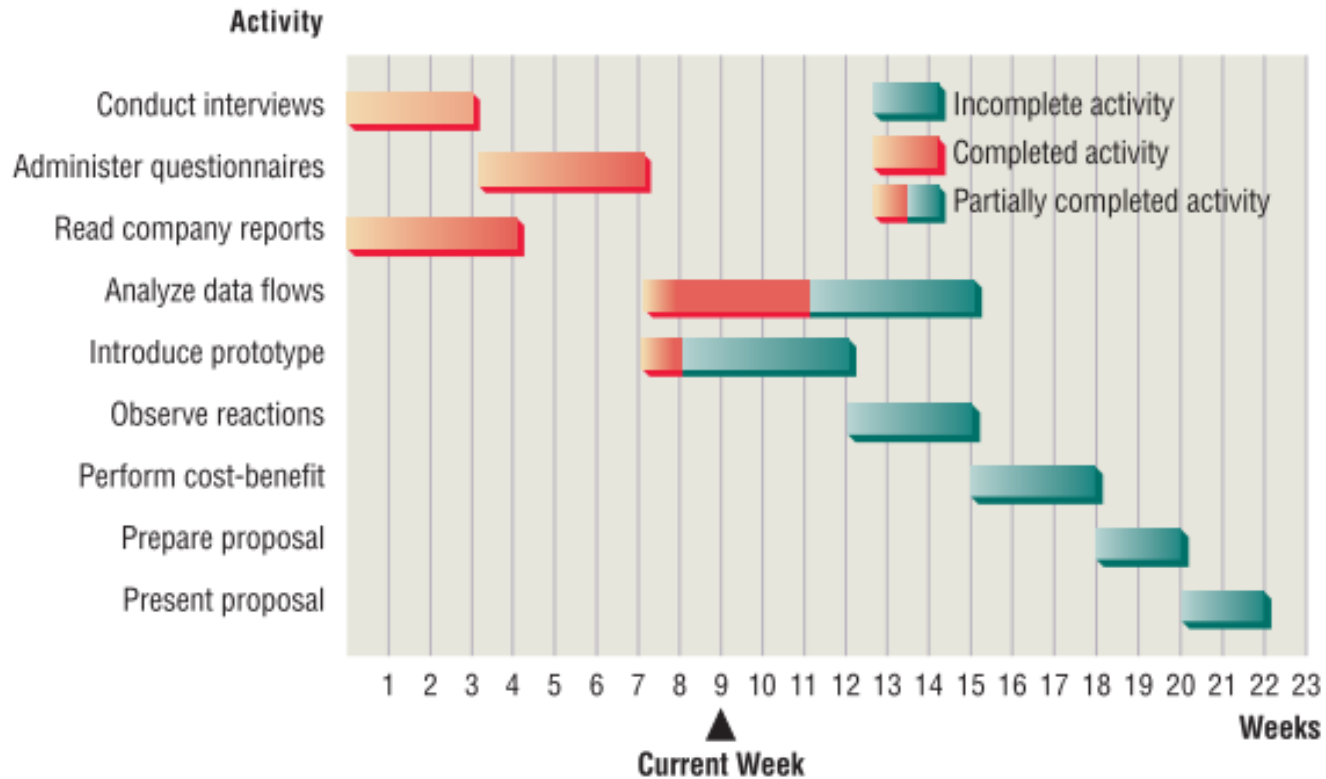
Tools: Gantt Project

- Download from: http://www.ganttproject.biz/

GanttProject Tutorial
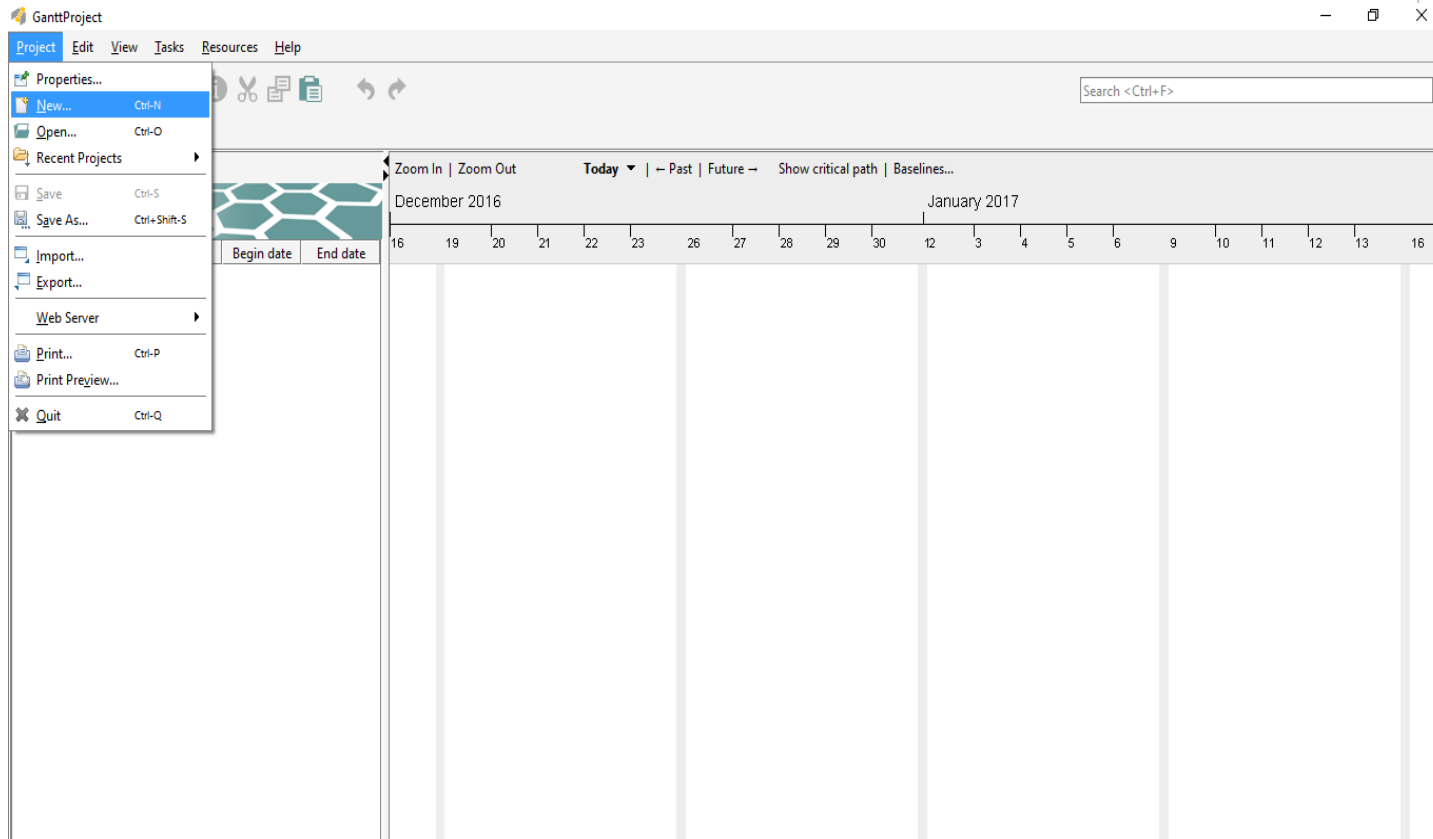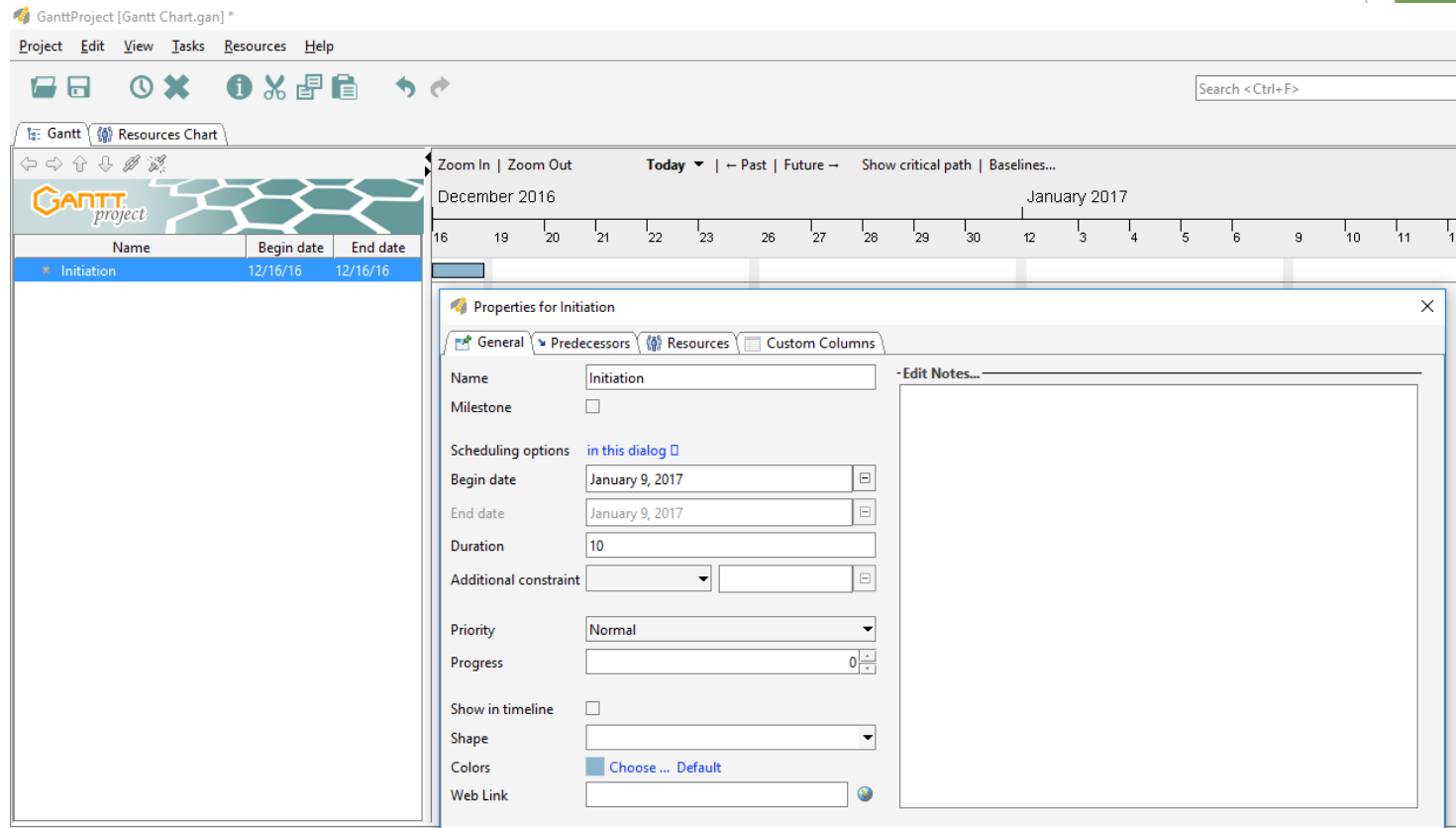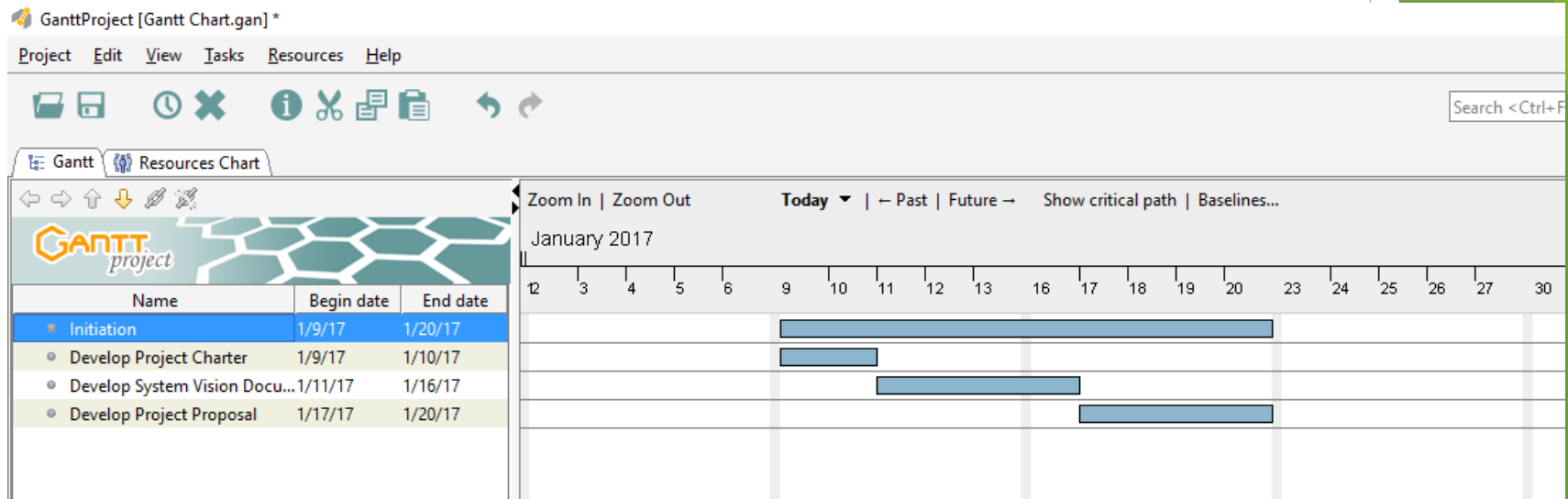
Create New Project

Create New Project

Save Project

Create New Task
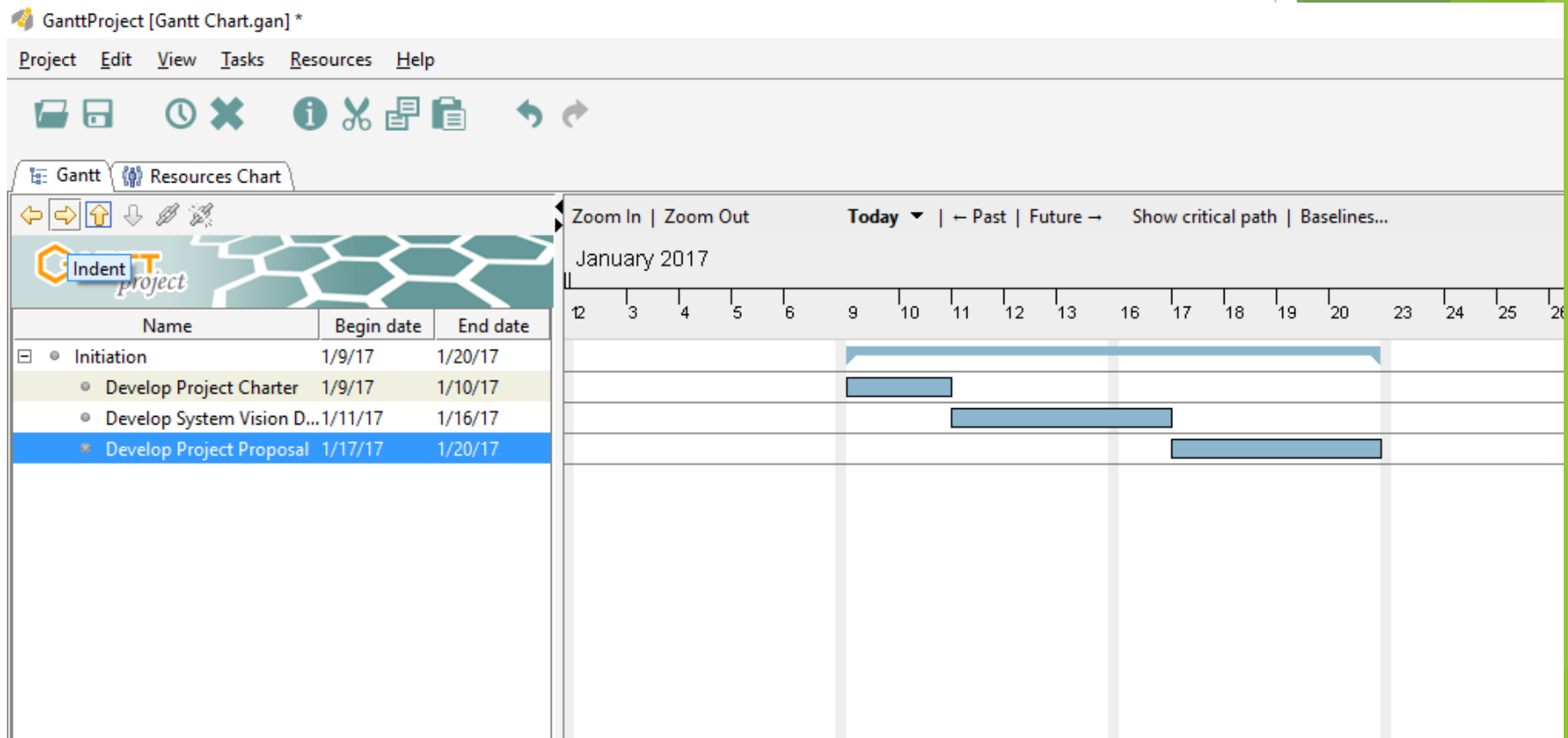
▶ Right click to add task

▶ Double click on the task to adjust setting

Create tasks

Indent Task

Baseline vs Actual

Change new Timeline

▶ Double click on the task to set new completion date

▶ The green bar indicates early completion. Green bar is the baseline

▶ The red bar indicates late completion. Red is the baseline

▶ The blue bar is actual timeline
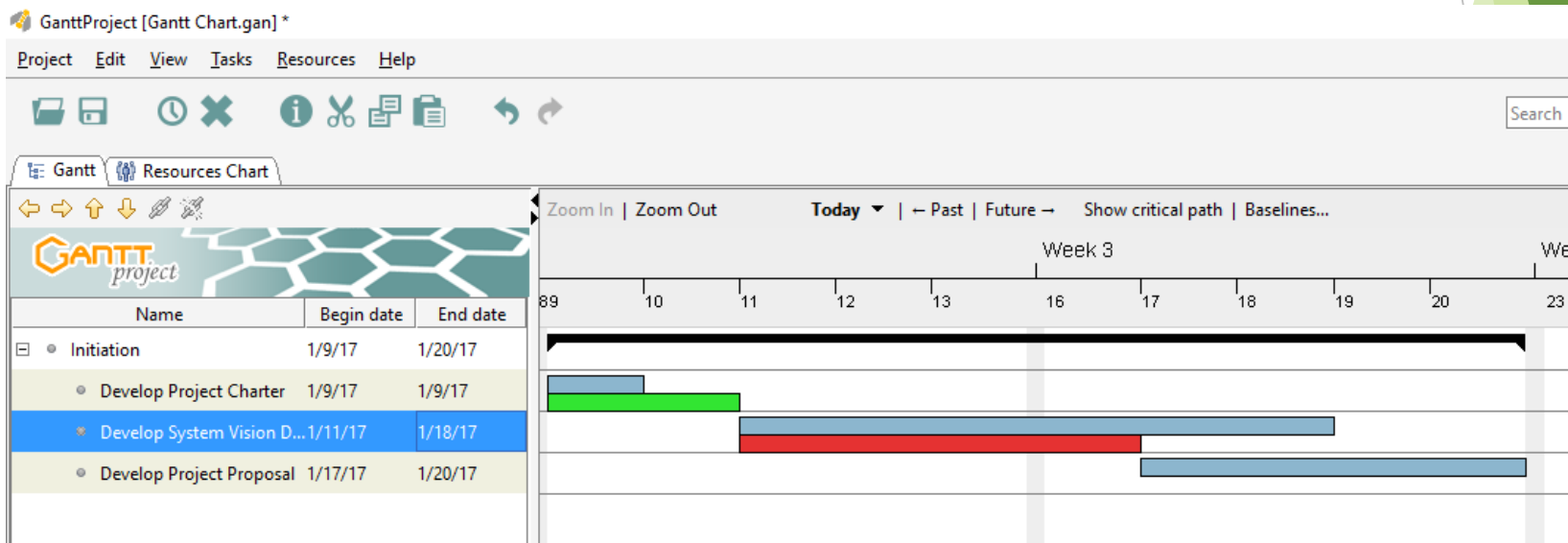
Resource Requirements

- Types of resource requirements:
  - People
  - Facilities
  - Equipment
  - Money
  - Materials

Example of Hardware and Software Requirements

Name	Description
Software	
Google Chrome	Browser use to view and test the web interface
Atom v1.11.2	Web programming editor use to code the web platform
JavaScript ES6	Main programming language for coding the platform
Hardware	
HP EliteBook	Laptop use for the development of platform