



Software Engineering

هندسة البرمجيات

جامعة بغداد

كلية التربية للعلوم الصرفة/ابن

الهيثم

قسم علوم الحاسبات

المرحلة الثالثة

م.د. علي يحيى غني



نظري محاضرة الاسبوع الرابع والعشرون

Software Project Management

Topics covered



- ✧ What is a project?
- ✧ What are the triple constraint of the project?
- ✧ What is a software project?
- ✧ What is a Project Life Cycle (PLC)?
- ✧ What is System Development Life Cycle (SDLC)
- ✧ System Development Life Cycle (SDLC) and Project Life Cycle (PLC)

What is a project?



- ✧ **Project** : A set of activities intended to produce a specific output, which has a definite beginning and end.
- ✧ **A Project** is “ a temporary endeavor undertaken to create a unique product, service, or result.”

What are the triple constraint of the project?



- ✧ **Scope:** What a work will be done as part of the project? What unique project, service, or result does the customer or sponsor expect from the project? How the scope be verified?
- ✧ **Time:** How long should it take to complete the project? What is the project's schedule? How will the team track actual schedule performance? Who can approve changes to the schedule?
- ✧ **Cost:** What should it cost to complete the project? What is the project's budget? How will costs be tracked? Who can authorize changes to the budget?

What are the triple constraint of the project?

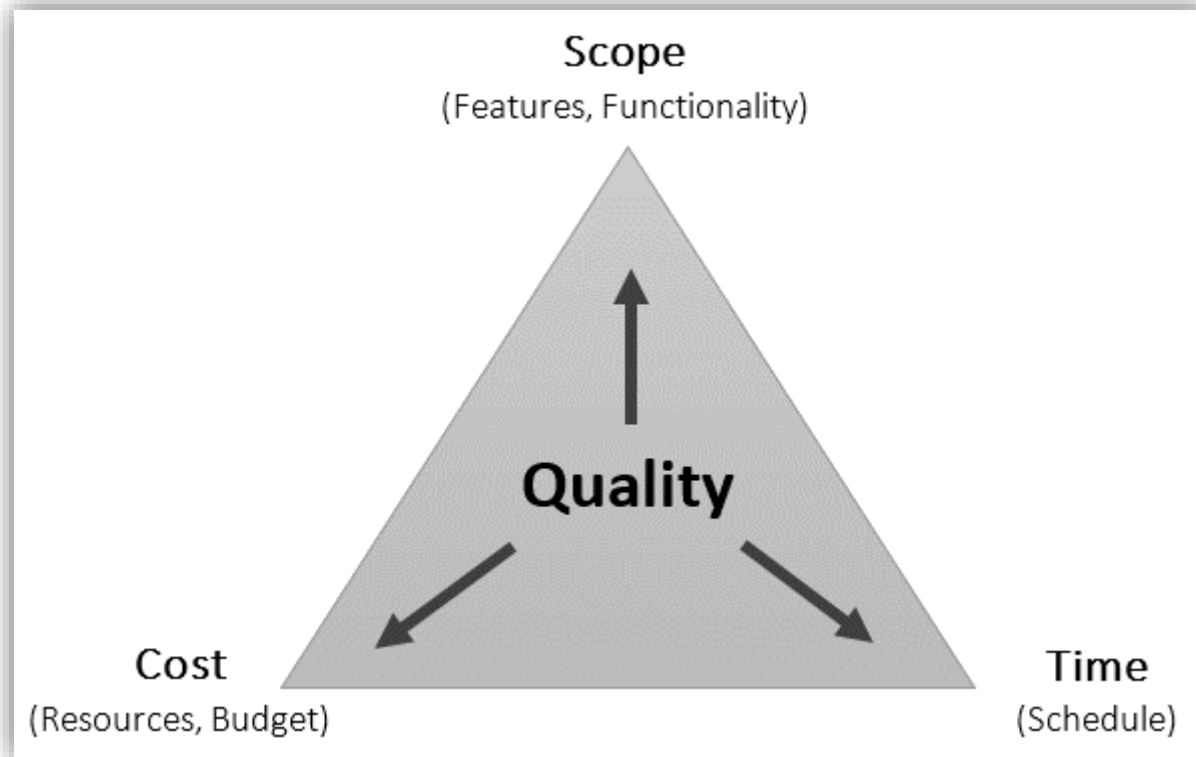


Figure 46: Triple constraints

What is IT and software project?



✧ **Information Technology Project (IT Project) and software project involve using :**

- **Hardware**
- **Software**
- **Networks**

To create a product, service, or result.

Examples of IT and software projects



- A large network of healthcare providers updates its information systems and procedures to reduce hospital acquired diseases.
- A team of students creates a smartphone application and sells it online.
- A company develops a driverless car.
- A college upgrades its technology infrastructure to provide wireless Internet access across the whole campus as well as online access to all academic and student service information.
- A company implements a new system to increase sales force productivity and customer relationship management that will work on various laptops, smartphones, and tablets.
- A television network implements a system to allow viewers to vote for contestants and provide other feedback on programs via social media sites.
- A government group develops a system to track child immunizations.
- A large group of volunteers from organizations throughout the world develops standards for environmentally friendly or green IT.
- A global bank acquires other financial institutions and needs to consolidate systems and procedures.
- Government regulations require monitoring of pollutants in air and water.
- A multinational firm decides to consolidate its information systems into an integrated enterprise resource management approach.

What is a Project Life Cycle (PLC)?



✧ **Project Life Cycle (PLC)** : is a collection of logical stages or phases that maps the life of the project from its beginning to its end in order to define, build, and deliver the product of a project-that is, the information system.

What is a Project Life Cycle (PLC)?



- ✧ **Define project goal:** The project is in the process of getting selected, sponsored, funded, and launched.
- ✧ **Plan project:** determines how the project work will get accomplished.
- ✧ **Execute Project:** The project team does the work.
- ✧ **Closing:** close out the project.
- ✧ **Evaluate the project:** Does the project meet its goal after it has been completed? (Electronic commerce site)

What is a Project Life Cycle (PLC)?

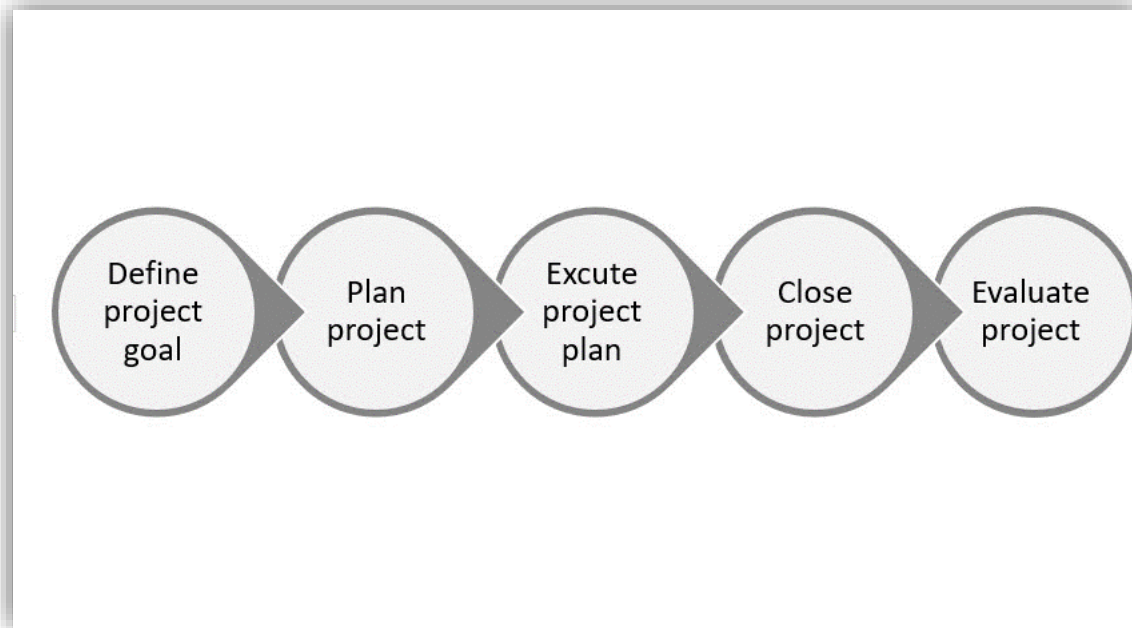


Figure 47: PLC

System Development Life Cycle (SDLC)?

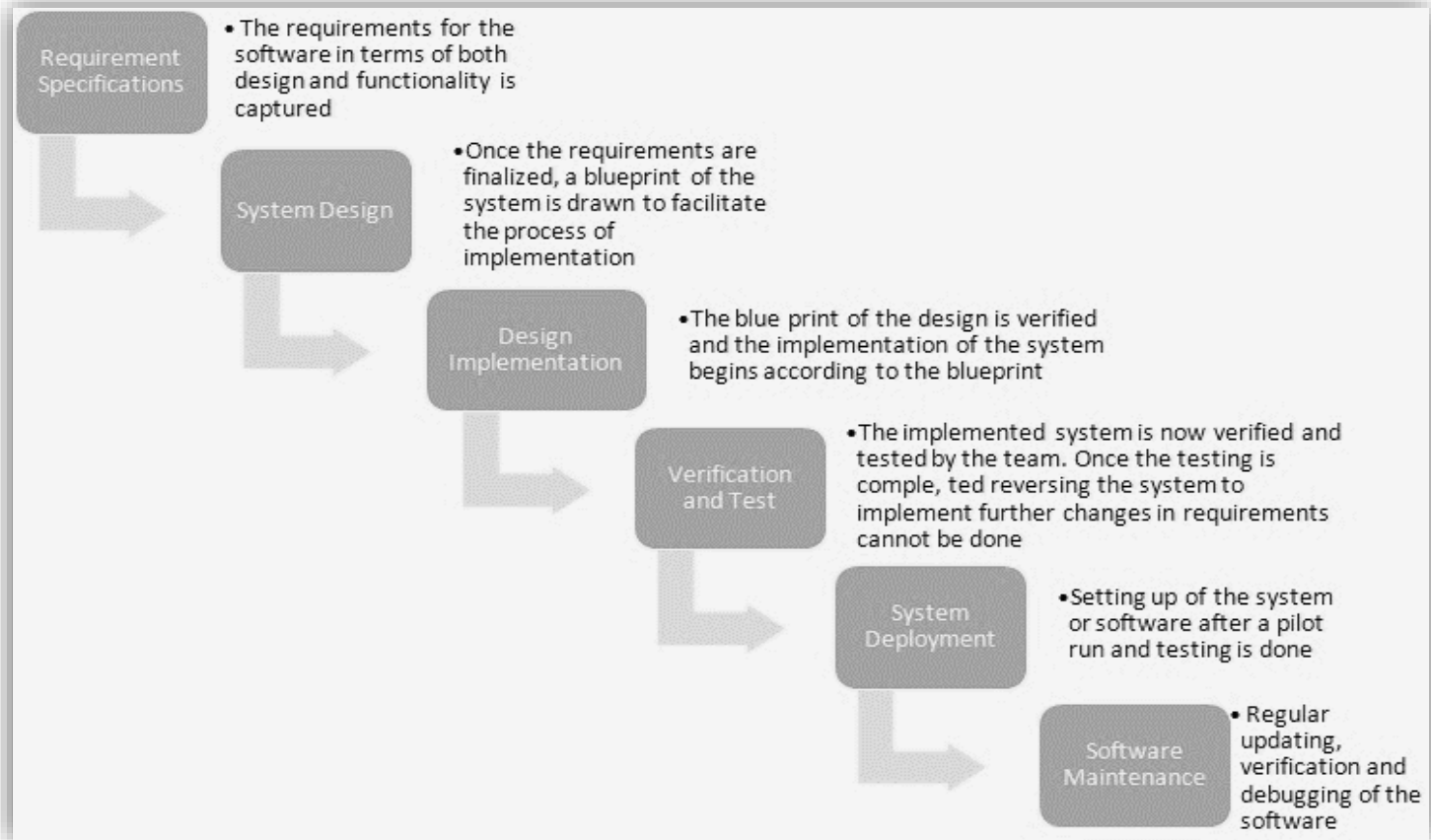


Figure 48 SDLC

System Development Life Cycle (SDLC) and Project Life Cycle (PLC)

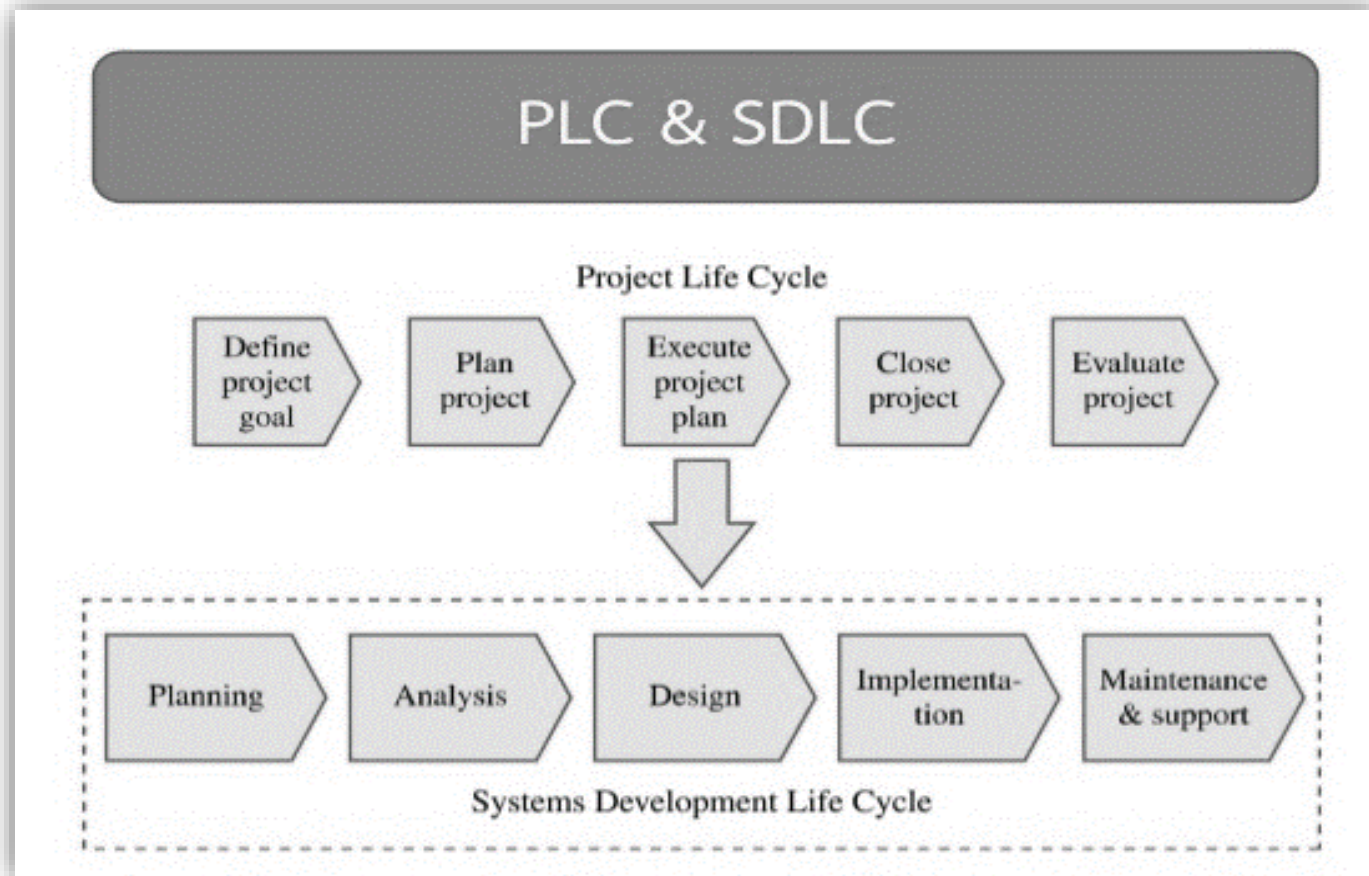


Figure 49 PLC and SDLC

Gantt Chart



- A Gantt chart, is a bar chart that graphically illustrates a schedule for planning, coordinating, and tracking specific tasks related to a single project.
- Henry Gantt, an American mechanical engineer, and social scientist, designed the Gantt chart in the 1910s. Since then, it has been used on major infrastructure projects like the Hoover Dam and the U.S. Interstate Highway System.

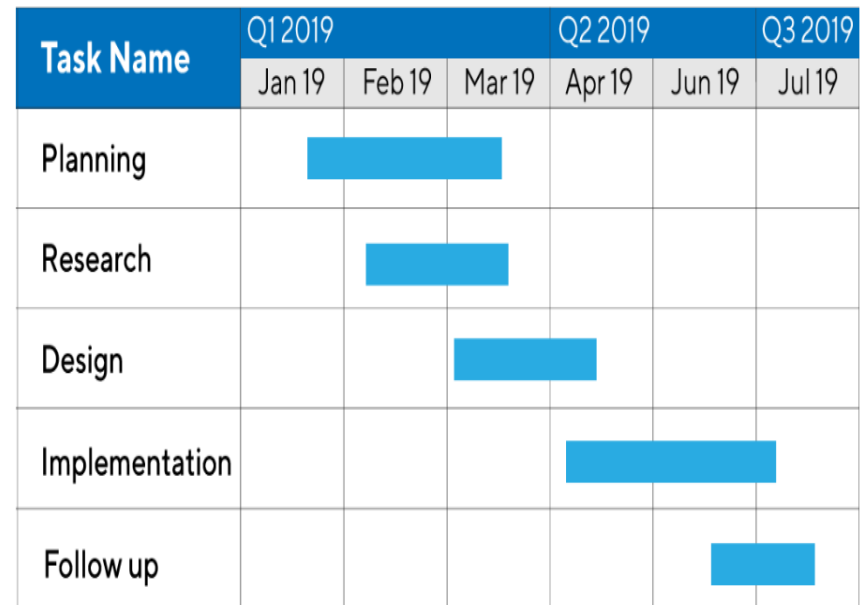


Figure 50 Gantt Chart



Thanks