Systems Development Life Cycles:

- The **systems development life cycle** (SDLC) is a general term used to describe the method and process of developing a new information system
- Without the structure and organization provided by SDLC approach projects are at **risk** for missed deadline, low quality etc
- SDLC provides
- ⇨ SDLC provides
    - Structure
    - Methods
    - Controls
    - Checklist
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Systems Investigation and Planning

- Problems and opportunities are identified
- The project planning phase includes **five activities**:
    - ⇨ Define the problem.
    - ⇨ Confirm project feasibility.
    - ⇨ Produce the project schedule.
    - ⇨ Staff the project.
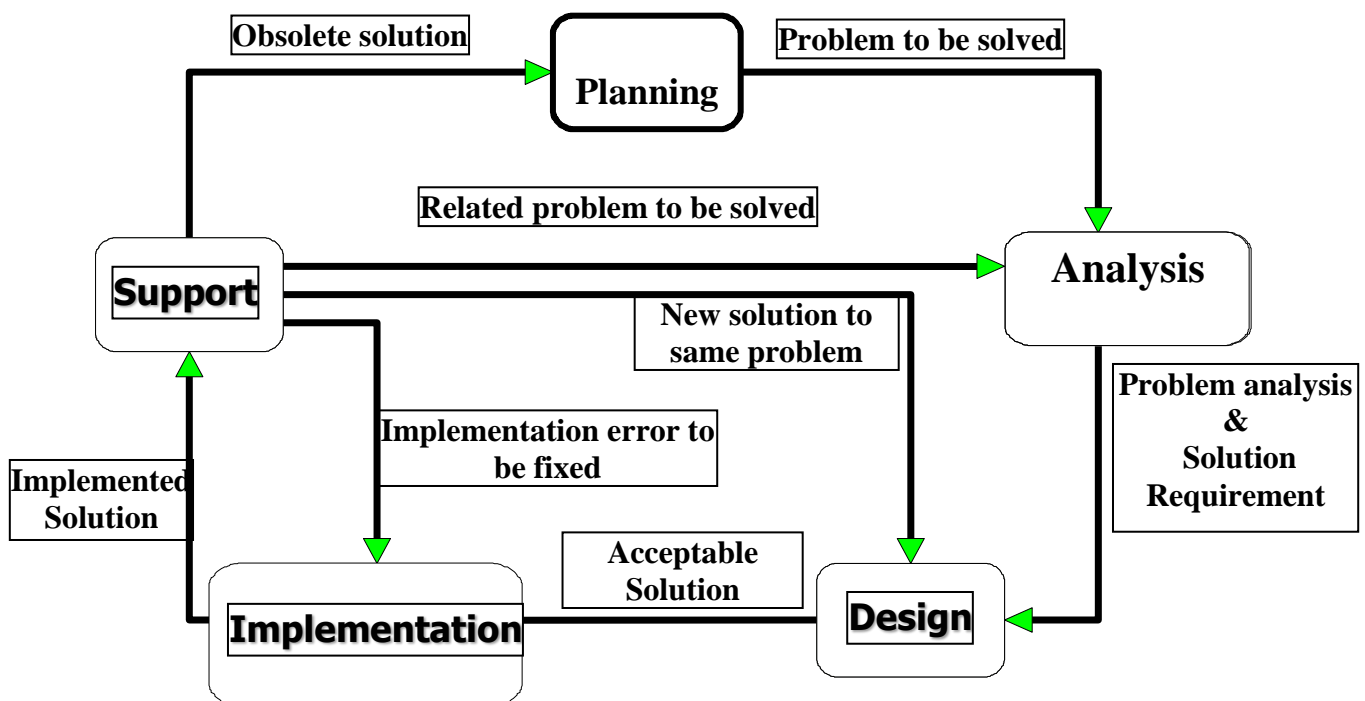   - ⇨ Launch the project.

Systems Analysis

- Existing systems and work processes are studied
- The analysis phase includes **six activities**:
    - ⇨ Gather information (e.g. interview, read, observe etc.)
    - ⇨ Define system requirements (reports, diagrams etc.)
    - ⇨ Build prototypes for discovery of requirements
    - ⇨ Prioritize requirements

⇨ Generate and evaluate alternative solutions

⇨ Review recommendations with management

® Systems Design

- Defines how the information system will do what it must do to solve the problem.

- The design phase includes **seven activities**:

⇨ Design and integrate the network

⇨ Design the application network

⇨ Design the user interfaces

⇨ Design the system interfaces

⇨ Design and integrate the database

⇨ Prototype for design details

⇨ Design and integrate the system controls

Obsolete solution	**Planning**	Problem to be solved

Related problem to be solved

Support → **Analysis**

New solution to same problem

Problem analysis & Solution Requirement

Implementation error to be fixed

Implemented Solution

Acceptable Solution

Implementation → **Design**

Systems Implementation

- System components are assembled and the new or modified system is placed into operation.

- The implementation phase includes **six activities**:

⇨ Construct software components

⇨ Verify and test

⇨ Develop prototypes for tuning

⇨ Convert data

⇨ Train and document

⇨ Install the system

Systems Maintenance and Review

- Ensures the system operates and is modified to keep up with business changes.

- The support phase includes **two activities**:

Provide support to **end users**

⇨ Help desks

⇨ Training programs

Maintain and enhance the computer system

⇨ Simple program error correction

⇨ Make sure that the system operates as expected

⇨ Modify functionalities that are not working properly

In "classical" life cycle these phases are sequential, but there are variations