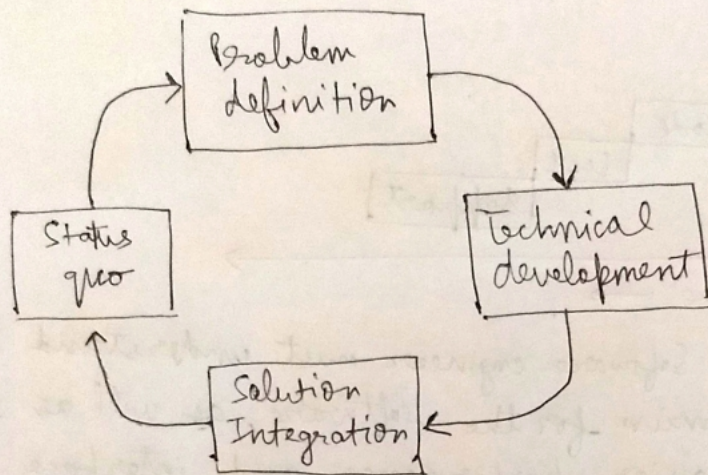


Software Process



All software development can be characterized as a problem solving loop in which four distinct stages are encountered: status quo, problem definition, technical development, and solution integration.

"Status quo" represents the current state of affairs.

"Problem definition" identifies the application problem to be solved.

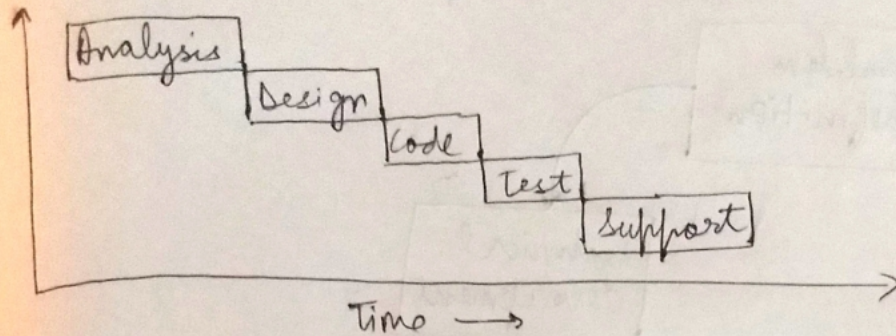
"Technical development" solves the problem through the application of some technology.

"Solution integration" deliver the results (ex documents, programs, data, new product) to those who requested the solution.



## The Linear Sequential Model

Linear Sequential Model (Waterfall Model) was proposed in 1970 by Winston Royce. The classic life cycle:



- i) **Analysis**: The Software engineer must understand the information domain for the software, as well as req function, behavior, performance, and interface.
- (ii) **Design**: Focuses on four attributes of a program
  - Data structure
  - Software Architecture
  - Interface representation
  - procedural detail
- (iii) **Code**: The design must be translated into a machine readable form.
- (iv) **Test**: Focuses on the logical internals of the software, ensuring that all statements have been tested, and on the functional externals to uncover errors and ensure the correctness of output.
- (v) **Support**: Software must be adapted to accommodate changes in the external environment (ex: new operating system or ~~from~~ peripheral device) and to the new requirements of the customer.