Requirement Elicitation

• Requirements elicitation is a requirements discovery process.
• Software engineers work with a range of system stakeholders to find out about the application domain, the services that the system should provide,the required system performance, hardware constraints, other systems,etc.

Stages include:
• Requirements discovery,
• Requirements classification and organization,
• Requirements prioritization and negotiation,
• Requirements specification.

UML

- UML stands for Unified Modeling Language.
- It is a general purpose graphical language that we use to visualize the design of a system.

Unified Process & RUP

- Unified Process or Unified Software development Process is a popular iterative and incremental software development framework which leverages the use of UML and other associated processes & concepts.
- The Unified Process is not a specific series of steps for constructing a software.
- The best-known and extensively documented refinement of the Unified Process is the Rational Unified Process (RUP). Other examples are OpenUP and Agile Unified Process.
- Phases of RUP: There is total of five phases of the life cycle of RUP:
  Inception , Elaboration, Construction, Transition.
  . Various activities take place during these phases: modeling, analysis and design, implementation, testing and application.

  Inception phase : It includes activities such as, Market research, frequent communications, risk assessment and project feasibility, understanding of project workflow and ideas.

  Elaboration phase: System architecture is designed and analyzed; and laid foundation for system architecture; Prioritize risk, produce project management plan.

  Construction phase : In this phase, the system is developed; and testing is done; product testing of the overall system. The release on this phase is sometimes known as beta release.

Transition phase: Faults in the system are corrected, All manuals are completed, Attempts are made to discover any previously unidentified risks; Rolling out project to market and distribution.

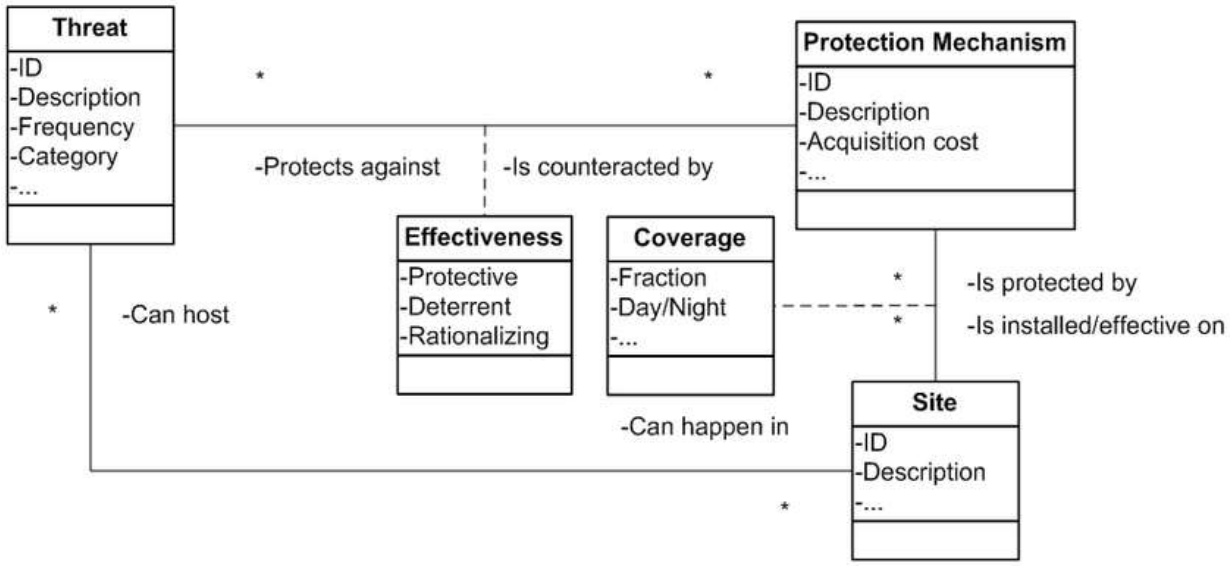

Fig : Conceptual class . (Class without operations).

Domain Model is Conceptual Class + Operations.

Sequence Diagram Fragments:

1. Opt : Defines condition to a single call - the call will execute only if the supplied condition is true . Equivalent to an alt with only one trace. => registration.
2. Alt (Alternative) => if-else;
3. Loop => login.

Errors are usually raised by the environment in which the application is running. For example, an error will occur due to a lack of system resources. Exceptions are caused by the code of the application itself. It is not possible to recover from an error.

Test-First Programming

Test-First Programming mandates that tests be written before the code, so that the code will always be testable. This is more efficient than having to change already written code to make it testable.
Test-First Programming doesn't say anything about other activities in the development cycle, like requirements analysis and design.