Requirements Specification

Abstract
Summarizes in a few sentences what the design is

System Description
Gives an overview and functional description of the system
Written from a client’s point of view

External view of the system
All system inputs and outputs are identified and briefly described

Use Case Diagram
Specifies the graphical and textual view of the use cases and the actors
Each use case must include
  A textual description of the use case including
    Responsibilities and operation
    Exceptions to the use case

Functional Behavior
Gives a description of the required behavior of the system from an external point of view
Considerations
  How to start the system
  How to stop it
  Requirements for use
    Pre conditions
    Post conditions
    Rules for use
  Constraints

Environmental Considerations and Requirements
  Speed
  Memory requirements
  Host requirements
  Display requirements
Design and Design Documentation

Abstract
Summarizes in a few sentences what the design is and does

System Description
Gives a detailed functional description of the system
Written from a designer’s point of view

Functional Decomposition
Identify
Major software functional blocks of the design
Information that must flow between the functional blocks

CRC Cards
Map the functionality expressed in functional decomposition to
Classes
Responsibilities of each class
Map the information flow between functional blocks
Collaborators with each class
Identify
Superclass(es)
Subclass(es)

Classes and Functions
Classes
Identify the classes
Brief textual description for each class
Initialization requirements
Invariants
Access specifications(s)
Functions
Identify the function
Brief textual description for each function
Identify
Pre conditions
Invariants
Post conditions

UML Class Diagram
For each class develop a class diagram
Data members
Function members
Structure
Identify relationships between or among classes
Inheritance
Composition
Uses
Creates

Test Plan
Based upon Requirements Specification
For each use case
  Identify what must be tested to verify the use case

Test Cases
Based upon the Test Plan and the Requirements Specification
For each use case
  Identify how the design must be tested to verify the use case
  The test code implementation to execute the test
  Identify
    What is expected when the test is executed
    The test result