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**Q15.** Compare and describe the requirements specification and requirements prioritization with suitable examples.

**Ans: Requirements Specification**

- Software Requirements Specification (SRS) is the official statement of what the system developers should implement.
- SRS should include both a definition of user requirement and a specification of system requirements.
- The characteristics of a good SRS document are that it should be correct, Unambiguous, Complete, Consistent, having a Ranked importance, Verifiable, Modifiable and Traceable.

Example of SRS document: I have depicted a screenshot of the contents of an SRS document of my innovative project (Air Ticket Reservation System).

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### **Requirements Prioritization**

- Project having multiple requirements, budget constraints and tight deadlines use project prioritization.
- Some of the requirements prioritization techniques are Ranking, Numerical assignment, MoScow technique, Bubble Sort Technique, Hundred Dollar Method and Analytic Hierarchy Process.

### **Ranking**

- Give priority by assigning a number to the requirement.
- Used when entertaining a single stakeholder

### **Numerical Assignment**

- Grouping of Requirements in a priority group.
- By developers - Critical, moderate or optional priority.
- By stakeholders - Compulsory, very important, rather important, not important and does not matter.
- Percentage of requirement in each category is restricted (not all requirements are high priority).

### **MoScow**

- Instead of number, 4 priority group: -
- MUST (Mandatory)
- SHOULD (High Priority)
- COULD (Preferred but not necessary)
- WOULD (Can be postponed and suggested for future execution)

### **Bubble Sort**

- Compare 2 requirements, whichever is more important put it first in list.

### **Hundred Dollar Method**

- Used when small number of requirements are to be prioritised.
- All stakeholders are given 100\$. Each will assign some amount to some requirement.
- At the end, requirement with more points will be prioritised first.

### **Analytic Hierarchy Process**

- Describes a framework to make correct decisions.
- Stakeholder decompose goal into smaller goals to make hierarchy.
- Comparison of elements of hierarchy is done and points are given on the basis of importance (based on data or some other factor).
- Higher the points, higher the priority.
- No of comparisons needed =  $N*(N-1)/2$ .