



Practical No. 1

Aim : To perform the System analysis:

Requirement analysis. SRS (Both functional and non-functional Requirements. for a set of 10 Sample problems, from a book on Software engineering by Rajib Mall.)

Theory

Software Requirement Specification (SRS) format as name suggests, is Complete Specification and description of requirements of Software that needs to be fulfilled for successful development of SW system.

These Requirements can be, functional as well as non-functional depending upon type of Requirement Functional Requirements:

Functional Requirements are mandatory which means it is Compulsory and needed to be fulfilled. They Generally describe and define features of end product of SW System and simply focuses on what the end product does.

There are the requirements that a System should accomplish or do like Calculations, data manipulations, etc.

functions or System function should be described in detail by functional System Requirement

Non-functional Requirements:-

Non-functional Requirements are not mandatory



which means that they are not compulsory to be fulfilled. It defines System properties and System performance.

different properties of System are there which can be Reliability, Response time, maintainability, availability, Storage Requirements.

Testing includes performance, stress, security testing etc. Non-functional Requirement are more disapproved & if the non-functional Requirement are not fulfilled then Complete System is of no use.

☰ Problem 1 (withdraw Cash from ATM)

An initial informal description of required functionality is usually given by customer as SOP (statement of purpose). An SOP serves as starting point for analyst and proceeds with Requirement gathering activity.

functional Requirements

• withdraw Cash [Requirement 1]

Description : The withdraw Cash function first determines the type of account that User has and account number from which the User wishes to withdraw Cash. It check the balance to determine whether the requested amount is available in account. If enough balance is available, it output required Cash, otherwise it generates an error message.



Requirement 2 : Select withdraw amount option

Input : "Withdraw amount" Option Selected

Output : User prompted to enter the account type

Requirement 3 : Select account type

Input : User Select Option from any one of
the following | Checking | deposit

Output : prompt to enter amount

Requirement 4 : Get Required amount

Input : amount to be withdrawn In Integer
Value greater than 100 and less than 10,000
In multiples of 100.

Output : The Requested Cash and printed
transaction statement

processing :- The amount is debited from the
User's account if sufficient balance is

available, otherwise an error message displayed

= problem 2

Search book availability in Library

The initial informal description of required

functionality is usually given by Customer as a
Statement of purpose. Functional Requirements,

Requirement 1 : Search book

Description : Once the User select the Search
Option, he would be asked to enter keywords.
The System would search the book in book

list based on the key words entered, after

making search, the System should output
the details of all books whose title or author



Chhatrapati Shahu Maharaj Shikshan Sanstha's
CHH. SHAHU COLLEGE OF ENGINEERING
Kanchanwadi, Paithan Road, Aurangabad.

Date :

Name match any of key words entered. The book details to be displays include : title, Author name, publisher name, year of publication, ISBN number, Catalog number & location in Library.

R.1.1 Select Search option

Input: "Search" Option

Output: User prompted to enter the key words

R.1.2 Search and display

Input: key words

Output: Details of all books whose title or author name matches.

R.2 Renew book [Requirement 2]

Description : When the "renew" option selected, the user is asked to enter his membership number & password. After password validation the list of the book borrowed by him are displayed. The user can renew any of his borrowed books by indicating them. A requested book cannot be renewed if it is reserved by another user. In this case an error message would be displayed.

R.2.1 Select renew option

State: The user has logged in and main menu has been displayed

Input: "renew" Option Selection.

Output: prompt message to the user to enter his membership number and password

R.2.2 Login

State: The renew option has been selected



Input: Membership number & password

Output: List of books borrowed by user is displayed. and User is prompted to select the books to be renewed, If the password is valid. If password is invalid, the user is asked to re-enter the password

processing: The password validation, Search the books issued to User from the borrower's list and display.

Next function

R.2.3 If possP password is valid and R.2.2. If password is invalid.

R.2.3 Renew selected books

Input : User choice for books to be renewed out of books borrowed by him.

Output: Confirmation of books successfully renewed and apology message for book could not be renewed

processing:- Check if any one has reserved any of requested book. Renew the books selected by the User in borrower's list, if no one has reserved those books.

Non-functional Requirements

N.1: Database

A database management System that is available free of cost / paid in different domain should be used to store data in manner so it can easily access to data.



N-2. platform: The System Should developed as per it can operated to any OS.

Both windows & Unix versions of SW need to be developed

N3: Web Support: It Should be possible to invoke the Query functionality from any place by using a web browser

N4: Safety management:-

The System concerned with possible loss or damage that could result from use of SW

N5: Security management:-

This Requirement should /must Satisfy.

Requirements regarding security & privacy on data used or created by SW.

Conclusion :-

Thus in this I practice about different Case studies for Specifying the Software Requirement Specification (SRS) and Invoking different functional and non functional requirement studies