Software Requirement Specification (SRS) for Personal Investment System

1. **Introduction** 
   1. **Purpose**:

Personal Investment System is intended to help the user keep account of his/her money invested in institutions such as Banks and Share Market.

This document is meant to delineate the features of PIS, so as to serve as a guide to the developers on one hand and a software validation document for the prospective client on the other.

* 1. **Scope:**

We describe what features are in the scope of the software and what are not in the scope of the software to be developed.

*In Scope:*

* + 1. Managing investment of a single user, which would include maintaining bookkeeping information about entities like Portfolio, Security, and Transaction.
    2. Computation of Net-Worth and Rate of Investment (ROI) of the Investor.
    3. Giving alerts to the user, if he requests for one.
    4. Downloading the current prices of shares from the web.
    5. User authentication.

*Out of Scope:*

* + 1. Features for actual purchasing and selling of securities. That is, actually buying and selling of shares/securities is done outside PIS.
    2. Tax computations for gains/losses.
    3. Any market related prediction.

* 1. **Definitions, Acronyms, and Abbreviations:**

*Acronyms and Abbreviations:*

* + 1. PIS: Personal Investment System.
    2. SRS: Software Requirements Specification.
    3. WWW: World Wide Web.
    4. GUI: Graphical User Interface.
    5. ROI: Rate of Investment.

*Definitions:*

* + 1. Transaction: A real event that involves flow of personal money. In the context of shares, it is buying/selling a group of shares of the same company, and in context of Bank it is deposit/withdrawal of money to/from one’s account.
    2. Security: A set of all transactions pertaining to a company share or a bank account.
    3. Portfolio: A set of Securities.
    4. Net-Worth: The sum total of all the money of the investor in form of shares and bank balances.
    5. ROI: The interest that user gets on a particular investment. In the context of a bank account it is the annual interest and in case of a company share it is defined as given in appendix A:

* 1. **References:**

Appendix A: Formula for ROI calculation for shares.

Appendix B: Formula for Net-Worth calculation.

Appendix C: User Screens.

* 1. **Overview:**

The rest of this SRS is organized as follows: Section 2 gives an overall description of the software. It gives what level of proficiency is expected of the user, some general constraints while making the software and some assumptions and dependencies that are assumed. Section 3 gives specific requirements which the software is expected to deliver. Functional requirements are given by various use cases. Some performance requirements and design constraints are also given. Section 4 gives some possible future extensions of the system. Finally the appendices in Section 5 describe respectively the formula for ROI calculation for shares and user screen.

1. **Overall Description:**

* 1. **Product Perspective:**

PIS is aimed toward a person who has considerable number of investments in stock market and banks, and so needs software assistance for book keeping and computations regarding the investments. PIS should be user-friendly, ‘quick to learn’ and reliable software for the above purpose.

PIS is intended to be a stand-alone product and should not depend on the availability of other software. It should run on both UNIX and Windows based platform.

* 1. **Product Functions:**

PIS should support the following use cases:

|  |  |  |
| --- | --- | --- |
| **Class of use cases** | **Use cases** | **Description of use cases** |
| Use case related to Installation | Installation | *Creates and initializes working files.* |
| Use cases related to system authorization | Login | *Login into PIS* |
| Change Password | *Change PIS password* |
| Use cases related to portfolios | Create portfolio | *Creates a new portfolio* |
| Rename portfolio | *Rename an existing portfolio* |
| Delete portfolio | *Delete an existing portfolio* |
| Use cases related to transactions | Add transaction | *Add a transaction to a security* |
| Edit transaction | *Edit an existing transaction* |
| Delete transaction | *Delete an existing transaction* |
| Use cases related to Information display | Display investment | *Display information of the entire investment* |
| Display portfolio | *Display information about a given portfolio* |
| Use cases related to computations | Compute net-worth | *Compute net-worth of investment/portfolio/security* |
| Compute ROI | *Compute ROI of a given security* |
| Use cases related to share prices | Get current share price | *Download the current share price from the net* |
| Edit share price | *Edit the price of a share already present in the list* |
| Use cases related to alerts | Set alerts | *Set alert giving date and details* |
| Show alerts | *Show all the pending alerts* |
| Delete alerts | *Delete an already set alert* |

* 1. **User Characteristics:** 
     1. The user should be familiar with the Investment related terminology like Portfolio/Security/Transaction.
     2. The user should know the details of a transaction.

* 1. **Principal Actors:**

The two principal actors in PIS are “user” and “system”.

* 1. **General Constraints:** 
     1. For full working PIS requires Internet connection.
     2. PIS is single-user software.

* 1. **Assumptions and Dependencies:** 
     1. Full working of PIS is dependent on the availability of Internet connection.
     2. The downloading of share prices in PIS is customized to www.indiainfoline.com. PIS would not work for any other website.
     3. The company shares registered in the National Stock Exchange (NSE) are only considered by PIS.

1. **Specific Requirements:**

**3.1 Performance Requirements:**

1. Should run on 500 MHz, 64 MB machine.
2. 90% of the responses should be within 2 sec, except for downloading current prices for which more time is acceptable.

**3.2 Design Constraints:**

1. *Security:* The files in which the information regarding securities and portfolios should be secured against malicious deformations.
2. *Fault Tolerance*: Data should not become corrupted in case of system crash or power failure.

**3.3 External Interface Requirements:**

The user screen is split vertically into two panes. The left pane contains the Investment tree, which expands and contracts as per user action. The right part displays the information related to investment/portfolio/security that is specified on the left pane. Appendix B shows the intended user screen.

1. **Future Extensions:**

a. PIS is intended to be a single user software. A possible future extension would be to make it multi user.

Diagram

Description automatically generated

Diagram

Description automatically generated