

Software Requirements Specification

for

Automatic Routine Management System

Version 1.0 approved

Prepared by

Subhobrata Dey <sbcd90@gmail.com>
Tridip Kr. Chakraborty <tridz.inc@gmail.com>
Dibyendu Das <iou.in.21@gmail.com>
Vikraman Choudhury
<vikraman.choudhury@gmail.com>
Sudipta Halder <sudiptaismm@gmail.com>
Ramit Hansda <ramit.ju.cse@gmail.com>

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Revision History

Name	Date	Reason For Changes	Version

1. Introduction

1.1 Purpose

Automatic Routine Management System (ARMS) is intended for the users in an educational institution to assign courses to teachers depending upon their preferences for a particular list of subjects.

This document is meant to delineate the features of ARMS, 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.

1.2 Document Conventions

Typeface of headers is “Times, 18 pt”, sub-headers is “Times, 14 pt”, and text is “Times, 12 pt”.

1.3 Intended Audience and Reading Suggestions

Developers interested in the project can start from the “Overview” section. Users and clients who are not acquainted with the purpose of the project can proceed from the “Introduction” section.

1.4 Project 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:

- a. Managing course preference selections of a single teacher, which would include course details.
- b. Consideration of teacher seniority.
- b. Computation of optimised solution of the assignment of courses to teachers.
- c. User authentication.
- d. Entry of subject list by administrator.

Out of Scope:

- a. Optimised solution may not be the most practically feasible solution.
- b. Optimised solution may not be fullproof.

1.5 References

<http://www.processimpact.com>

2. Overall Description

2.1 Product Perspective

The Automatic Routine Management System is an innovative software product that generates a possible solution to the problem of assigning subjects to teachers in an educational institution.

2.2 Product Features

- List of subjects and teachers available to be entered by administrator
- Teachers' preference to be entered by teachers
- Optimized solution generated by software
- Formatted output viewable by user

2.3 User Classes and Characteristics

- Administrator : Enumerate the list of teachers and subjects
- Teacher : Input preference
- User : View assignment of subjects to teachers

2.4 Operating Environment

The software is distributed as JAVA™ jar file which is a platform independent executable and can be executed on all platforms which have the JRE (JAVA™ runtime environment) installed with the AWT class library. The graphical user interface of the application will be displayed in the respective windowing subsystem used by the operating system.

2.5 Design and Implementation Constraints

None

2.6 User Documentation

Available online at : <http://github.com/vh4x0r/ARMS/>

Also available offline from the Help menu within the application.

2.7 Assumptions and Dependencies

None

3. System Features

To be added in further revisions.

4. External Interface Requirements

4.1 User Interfaces

To be added in further revisions.

4.2 Hardware Interfaces

To be added in further revisions.

4.3 Software Interfaces

To be added in further revisions.

4.4 Communications Interfaces

To be added in further revisions.

5. Other Nonfunctional Requirements

5.1 Performance Requirements

Optimised solution should be generated in realtime so that the data is available to user after logging into the system,

5.2 Safety Requirements

None.

5.3 Security Requirements

User must be a student having a valid student ID to view the list of courses assigned to teachers.
Teacher having a valid teacher ID can enlist the subjects and choose his subjects of preference.
Administrator can update the list of subjects, as well as manage the user database.

5.4 Software Quality Attributes

The software is developed using a simple GUI, which is intuitive for any new user.

6. Other Requirements

Appendix A: Glossary

Acronyms and Abbreviations:

- a. ARMS : Automatic Routine Management System.
- b. SRS: Software Requirements Specification.
- c. WWW: World Wide Web.
- d. GUI: Graphical User Interface.