SRS Document for University Research Paper Management System (URPMS)

1. Introduction

1.1 Purpose

The purpose of this document is to define the requirements for the University Research Paper Management System (URPMS). This computer-based system will enhance efficient and transparent methods of submitting, reviewing, managing, and publishing research papers within the university.

1.2 Intended Audience

- **Researchers and Professors:** Use the system to submit and manage research papers.

- **Students:** Search for and access research papers.

- **Administrators:** Manage users, submissions, and generate reports.

1.3 Product Scope

The URPMS will automate and manage the research paper lifecycle, covering submission, reviewing, access logging, and tracking its publication. The system will link students, authors, reviewers, and administrators on one web-based platform.

1.4 References

- IEEE Standard for Software Requirements Specifications (IEEE Std 830-1998)

1.5 Overview

This document is organized into sections detailing the functional and non-functional requirements, system features, external interface requirements, and more.

2. Overall Description

2.1 Product Perspective

Context and Origin:

The University Research Paper Management System (URPMS) is a new, self-contained product designed to streamline and automate the research paper management process within the university. It is intended to enhance the current paper submission and review process rather than replace any existing systems. The URPMS will operate independently but will be integrated into the university's existing infrastructure to leverage existing authentication systems and academic databases.

Key Contextual Points:

- **Integration:** The system will integrate with the university's authentication system to provide secure user access and with the academic database to manage research paper categorization and metadata.

- **Scope:** It serves as a standalone platform focused on research paper management, complementing existing academic management systems by providing dedicated functionality for paper submission, review, and tracking.

- **User Roles:** The system will facilitate interactions between authors, reviewers, and administrators, enhancing the management and oversight of the research paper lifecycle.

Diagram:
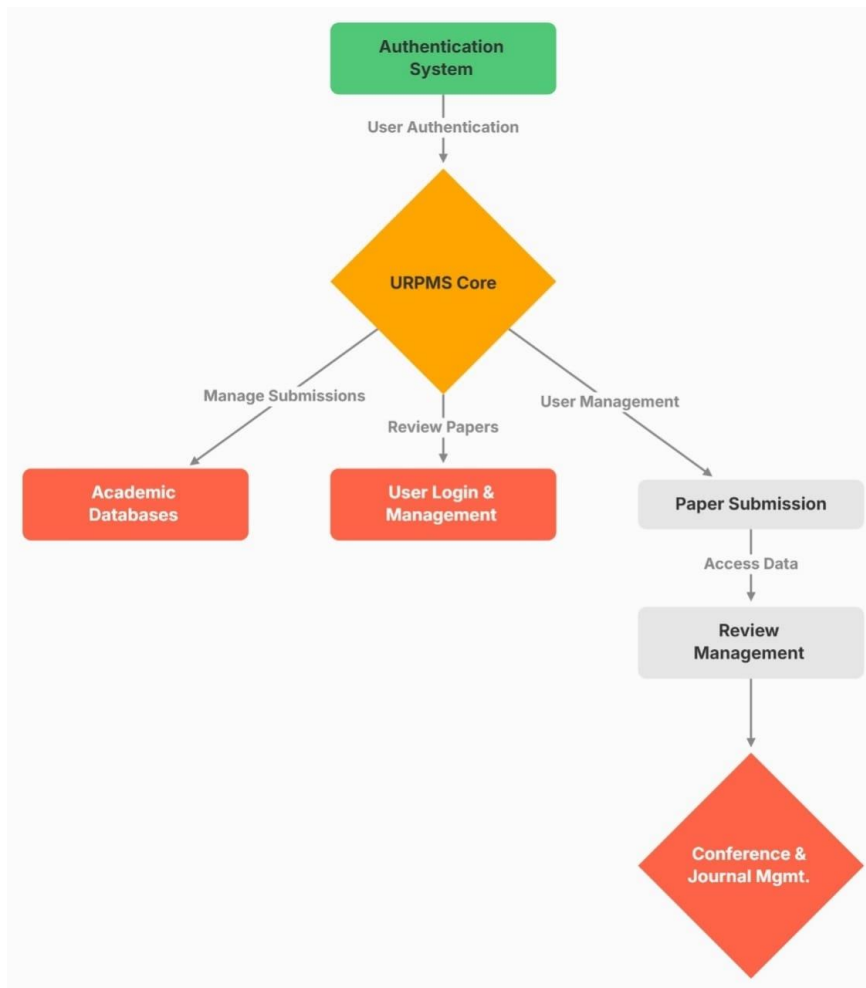
2.2 Product Functions

- **User registration and management:** Authors, Reviewers, Administrators

- **Submission, tracking, and management of papers**

- **Access logs:** Track activities

- **Review management:** Peer review and feedback

- **Domain and department association**

- **Conference/journal management:** Paper submissions

2.3 Classes and Responsibilities of Users

- **Authors:** Can submit and manage their research papers.

- **Reviewers:** Review papers assigned to them and provide feedback.

- **Administrators:** Manage users, domains, conferences/journals, and oversee the system.

2.4 Operating Environment

- **Software:** The software will run on a web-based operating platform accessible to popular browsers.

2.5 Design and Implementation Constraints

- Adhere to IT security policies and data protection standards set by the university.

- Designed for multiple user roles, each with different permissions.

2.6 Assumptions and Dependencies

- Stable internet connection among users.

- Regular maintenance and backup of the database.

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3. External Interface Requirements

3.1 User Interfaces

- Web-based interface; dashboards for authors, reviewers, and administrators.

- Facilities for paper submission, review feedback, and administrative management.

3.2 Software Interfaces

- **Database:** User data, papers, reviews, log records, etc.

- **API:** Integrated services for journal/conference management.

3.3 Communication Interfaces

- Secure protocols for data transmission.

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4. System Features

4.1 User Management

- **Description:** Manage user signup, role, and permissions.

- **Functional Requirements:**

  o Registration facility for users as author or reviewer.

  o Facility for administrators to manage user roles and permissions.

4.2 Paper Submission

- **Description:** Facility for authors to submit and manage research papers.

- **Functional Requirements:**

  o Upload research papers and assign them to a domain and conference/journal.

  o Manage the status of each submission.

4.3 Review Management

- **Description:** Allows review of submitted papers.

- **Functional Requirements:**

  o Access to assigned papers for review and feedback.

  o Notification to authors once a review is complete and facility for revisions.

4.4 Access Logs

- **Description:** Track actions made on the system.

- **Functional Requirements:**

  o Log users' actions for accountability and auditing purposes.

4.5 Domain and Department Management

- **Description:** Map papers to related academic domains and departments.

- **Functional Requirements:**

  o Classification of papers with respect to pre-defined domains and departments.

4.6 Conference/Journal Management

- **Description:** Manage conference/journal submissions.

- **Functional Requirements:**

  - Maintain a list of conferences/journals for which paper submissions are open along with deadlines.

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5. Non-Functional Requirements

5.1 Performance Requirements

- **Response Time:** The system shall respond to user actions within 3 seconds.

- **User Load:** Handle up to 50 concurrent users without noticeable performance degradation.

5.2 Security Requirements

- **Data Encryption:** Sensitive data must be encrypted during transmission using standard encryption protocols.

- **Access Control:** Implement role-based access control (RBAC) to restrict access based on user roles.

5.3 Usability Requirements

- **Interface Design:** Simple, intuitive interface with clear navigation.

- **Help Features:** Basic tooltips and a help section available for user assistance.

5.4 Reliability Requirements

- **Uptime:** Aim for 99% uptime, excluding scheduled maintenance.

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6. Other Requirements

6.1 Regulatory Requirements

- **Compliance:** Comply with university policies related to data protection and user privacy.

6.2 Environmental Requirements

- **Operational Environment:** Function correctly in typical office environments with standard hardware and software configurations.

Requirement Traceability Matrix

Sl. No	Requirement ID	Brief Description of Requirement	Architecture Reference	Design Reference	Code File Reference	Test Case ID	System Test Case ID