

Software Requirements Specification

Of

RESEARCH JOURNAL MANAGEMENT
SYSTEM

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Chapter 1

Introduction

1.1 Purpose:

The purpose of this document is to give an overview of the management system's requirements by providing all the system's functionalities.

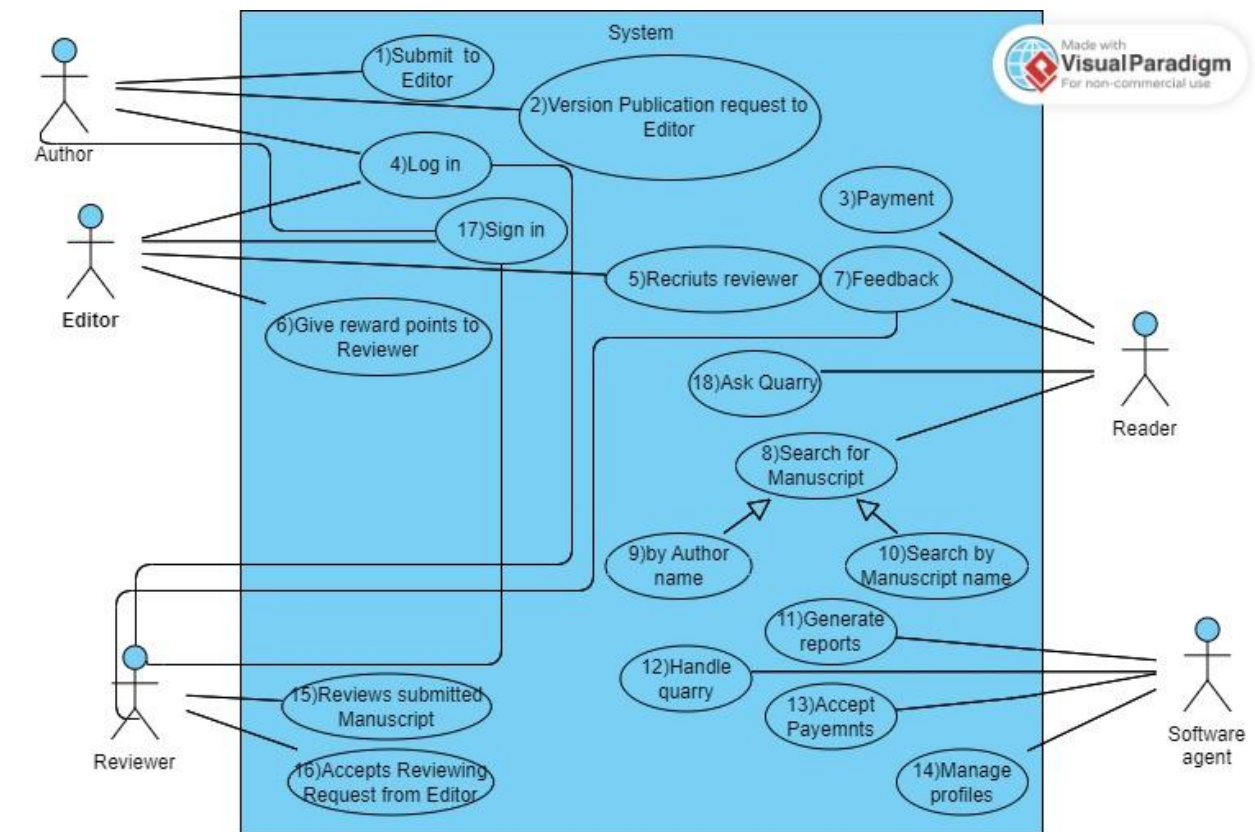
1.2 Scope:

This system can be used to manage a large number of journals so that it can be used in the field of education, research and development.

1.3 System Description:

In this software register authors can submit their manuscripts; editors assign reviewers who gave review to the manuscript which they are assigned. Apart from it outside readers can read contents by paying required amount of money.

1.4 Use Case Diagram:



Chapter 2

Functional Requirements

2.1) Login

- **Purpose:** it determines whether a pre-register valid user is entering in the system or not, and restricts invalid user from entering the system (refer to use case 1.5).
- **Actors:** Editor, Reviewers, Authors.
- **Precondition:** The user has to be previously registered in the system.
- **Inputs:**

Input Element	Type	Optional/Required	Rules
Username	Alphanumeric	Required	Character length should be in between 5 to 10
Password	Alphanumeric	Required	Character length should be in between 5 to 10

- **Outputs:** A message which will show whether the user has successfully logged in the system or not. In case of unsuccessful login the login page will be refreshed along with the message. In case of successful login the homepage will come along with the message.

2.2) submit the manuscript

- **Purpose:** This is essential steps and requirements for authors to submit their work for review and potential publication within the system.
- **Actors:** Authors.
- **Precondition:** Author must be Login Authenticate user, have to prepare manuscript following submission guidelines, provided necessary metadata and acknowledged submission terms and condition.
- **Inputs:**

Input Elements	Type	Optional/Required	Rules
Manuscript File	Document File(Pdf, Word)	Required	One of the accepted format and Must contain complete research paper.
Metadata	Text File	Required	<ul style="list-style-type: none">• Provide Concise Title for Manuscript• Include any

			Acknowledge ment and Funding Information <ul style="list-style-type: none"> • Include abstract Summarized paper
Additional Files	Document File (pdf, images)	Optional	Author may asked to submit supplementary files such as images
Confirmation of Submission Terms	Checkbox	Required	Author must agreed acknowledge that they have read and agree to the submission terms and conditions.

- **Output:**
 1. **Description:** A confirmation message indicating that the manuscript has been successfully submitted to the editor for review.
 2. **Destinations of the Outputs:** The confirmation message is displayed to the Author on their interface.
 3. **Units of Measure:** Textual information.
 4. **Range of Valid Outputs:**
 - a. **Submission Confirmation:** A message confirming the successful submission of the manuscript to the editor.
 5. **Report Format:** The output is typically a message displayed on the Author's interface.
- **Post condition:** After successful submission, the author receives a confirmation email, and the manuscript enters the review process the a 'Submitted Status'.

2.3) New Version publication request

- **Purpose:** is to ensure that the author can request to editor for uploading a new version of the previously submitted manuscript.
- **Actors:** Author.
- **Precondition:** A manuscript should be submitted before it
- **Inputs:**

Input Elements	Type	Required/Optional	Rules
Manuscript Selection	Select List	Required	Author selects the manuscript they intend to

			update as new version.
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- **Output:**
 1. **Description:** A yes or no feedback from the editor indicating whether the author can upload a new version or not.
 2. **Units of Measure:** Textual information.
- **Post condition:** now the author can upload a renew version of his or her previously submitted manuscript.

2.4) Recruit Reviewer

- **Purpose:** is to identify and invite qualified reviewers with expertise in the relevant field to assess and provide feedback on submitted manuscripts. This process aims to ensure a rigorous and impartial peer review of manuscripts for potential publication.
- **Actors:** Editor
- **Precondition:** Editor is a register and authenticated user within the system
- **Inputs:**

Input Elements	Type	Optional/Required	Rules
Reviewer Selection	Selection	Required	Select candidates based on their expertise and suitability for the manuscripts.
Review Criteria	Text or Guidelines	Optional	Editor may specify the criteria or guidelines for the review process

- **Output:**
 1. **Description:** A confirmation message indicating that the invitation to serve as a reviewer has been successfully sent to the selected individual.
 2. **Destinations of the Outputs:** The confirmation message is displayed to the Editor on their interface.
 3. **Units of Measure:** Textual information.
 4. **Range of Valid Outputs:**
 5. **Invitation Confirmation:** A message confirming the successful sending of the reviewer invitation.

6. **Report Format:** The output is typically a message displayed on the Editor's interface.

- **Postconditions:** The Editor include successful invitations sent to potential reviewers, reviewers responses recorded, and the initiation of the peer review process.

2.5) Give Reward Points to reviewers

- **Purpose:** To acknowledge and incentivize reviewers for their valuable contributions to the peer review process.
- **Actor:** Software agent
- **Preconditions:** reviewers must be registered, authenticated users who have completed quality manuscript reviews within the system, and a reward points system should be in place with available points for allocations.
- **Input:**

Input Elements	Type	Required/Optional	Rules
Reward points Allocation	Numeric Value or selection	Required	Specify the number of reward points
Reward points description	Text	Optional	Provide an optional description or reason for the reward points.

- **Output:**
 1. **Description:** A confirmation message indicating that reward points have been successfully allocated to the selected reviewers' accounts.
 2. **Destinations of the Outputs:** The confirmation message is displayed to the Editor on their interface.
 3. **Units of Measure:** Textual information.
 4. **Range of Valid Outputs:**
 5. **Reward Points Allocation Confirmation:** A message confirming the successful allocation of reward points to reviewers.
 6. **Report Format:** The output is typically a message displayed on the Editor's interface.
- **Postcondition:** The allocated reward points are successfully assigned to reviewers, and their reward points balances are updated within the system.

2.6) Review submitted manuscript

- **Purpose:** assessing and evaluating research manuscripts to maintain the quality and credibility of the research journal. Reviewers, as subject-matter experts, provide feedback and recommendations to aid in the decision to publish or reject a manuscript.
- **Actor:** Reviewer
- **Precondition:** the reviewer must be assigned a manuscript for review.
- **Input:**

Input Element	Type	Optional/Required	Rules
Reviewer Id	Text	Required	Unique identifier for the reviewer.
Manuscript ID	Text	Required	Unique identifier for the manuscript to be reviewed.
Reviewer Comments	Text	Optional	Additional comments or notes provided by the reviewer.
Reviewer Decision	Dropdown	Required	Reviewer's decision (e.g., Accept, Reject, Revise).

- **Output:**
 1. **Description:** A comprehensive report summarizing the outcome of the manuscript review, including reviewer comments, ratings, and the final decision.
 2. **Destinations of the Outputs:** The output report is stored in the system's database for reference. Additionally, a notification of the review outcome is sent to the author and journal administrators.
 3. **Units of Measure:** Textual information, numerical ratings.
 4. **Range of Valid Outputs:**
 - a. Reviewer Comments: Textual feedback
 - b. k provided by the reviewer.
 - c. Reviewer Ratings: Numeric values Reviewer Decision: A designated decision
 5. **Report Format:** The output report should include the following sections:
 - a. Manuscript ID: Unique identifier for the reviewed manuscript.
 - b. Reviewer ID: Unique identifier for the reviewing reviewer.
 - c. Reviewer Comments: Detailed textual feedback provided by the reviewer.
 - d. Reviewer Ratings: Numerical scores or ratings given by the reviewer.

- e. **Reviewer Decision:** The final decision made by the reviewer (e.g., Accept, Reject, Revise).
 - f. **Timestamp:** Date and time when the review was completed.
- **Post condition:** A review record is created and stored in the system's database, and the manuscript's review status is updated accordingly.

2.7) Accept Reviewing request from editor

- **Purpose:** The purpose is to allow reviewers to acknowledge and accept requests from journal editors to review specific research manuscripts.
- **Actor:** Reviewer
- **Precondition:** The reviewer has been sent a reviewing request from the editor.
- **Input**

Input Element	Type	Optional/Required	Rules
Reviewer Id	Text	Required	Unique identifier for the reviewer.
Manuscript ID	Text	Required	Unique identifier for the manuscript to be reviewed.
Reviewer Availability	Calendar/Date and Time	Optional	Date and time when the reviewer will be available to start the review

- **Output:**
 1. **Description:** A confirmation notification or status updates indicating that the reviewer has accepted the review request and with a feedback..
 2. **Destinations of the Outputs:** The output is typically sent to the system's notification module, updating the reviewer's and editor's notification status.
 3. **Units of Measure:** Textual information.
 4. **Range of Valid Outputs:**
 - a. **Confirmation Message:** A message indicating successful acceptance.
 - b. **Status Update:** The review request status is updated to "Accepted."
 5. **Report Format:** No formal report is generated, but the system should log and update the status of the review request.
 - a. The output serves to confirm and document the acceptance of the review request, allowing the editor and reviewer to proceed with the manuscript review process.

- **Post condition:** The reviewer has successfully accepted the review request, and the status of the review request for the specified manuscript is updated to "Accepted" in the system.

2.8) Search for Manuscript

- **Purpose:** The "Search for Manuscript" use case allows reviewers to locate and access research manuscripts within the system, enhancing their efficiency in finding assigned reviews or relevant manuscripts based on specific criteria such as keywords or authors.
- **Actor:** Reviewer, Reader.
- **Precondition:** The reviewer is logged into the research journal management system with valid credentials.
- **Input:**

Input Element	Type	Optional/Required	Rules
Manuscript Search Term	Text	Optional	Keywords or search terms to refine the search.
Author Name	Text	Required	The name of the manuscript's author for targeted search.

- **Output:**
 1. **Description:** A list of research manuscripts that match the search criteria, if any, or a list of assigned manuscripts to the reviewer.
 2. **Destinations of the Outputs:** The output is displayed to the reviewer on their user interface within the research journal management system.
 3. **Units of Measure:** Textual information.
 4. **Range of Valid Outputs:**
 5. **List of Manuscripts:** The system should display a list of manuscripts that match the search criteria or the reviewer's assigned manuscripts.
 6. **No Results Found:** In case there are no matching manuscripts, the system should indicate that no results were found.
 7. **Report Format:** The output should be presented in a tabular or list format, displaying relevant details of each manuscript, such as title, author, submission date, and status.
- **Postcondition:** The reviewer has retrieved a list of research manuscripts based on the search criteria or has accessed a list of assigned manuscripts, as per their request. The search results or assigned manuscripts are displayed on the reviewer's interface within the research journal management system.

2.9) Payment:

- **Purpose :** The purpose of the "Payment" use case for a Reader is to enable them to complete payment for accessing or subscribing to premium content, journals, or publications offered by the research journal platform. This facilitates the Reader's access to high-quality academic materials and supports the sustainability of the platform.
- **Actor:** Reader
- **Precondition:** The Reader is logged into the research journal platform with a registered account and has selected premium content or a subscription plan for which payment is required.
- **Input:**

Input Element	Type	Optional/Required	Rules
Reader ID	Text	Required	Unique identifier of the logged-in Reader.
Payment Method	Dropdown	Required	Selected payment method (e.g., Credit Card, PayPal, GPay).
Payment Amount	Numeric	Required	The total amount to be paid for access or subscription.
Billing Information	Text	Required	Billing information such as name, address, and payment details.
Security Code	Text	Required (if applicable)	Security code for the selected payment method (e.g., CVV for credit card).

- **Output:**
 1. **Description:** A payment confirmation or receipt that provides details of the completed transaction.
 2. **Destinations of the Outputs:** The payment confirmation or receipt is typically displayed to the Reader on their user interface and may also be sent to their registered email address.
 3. **Units of Measure:** Textual and numerical information.
 4. **Range of Valid Outputs:**
 5. **Payment Confirmation:** A message confirming the successful payment transaction, including details like transaction ID, payment amount, and timestamp.

6. **Receipt:** A digital receipt with transaction details, including the Reader's name, billing address, payment method, and transaction ID.
7. **Report Format:** The output should be presented in a clear and organized format, displaying all relevant payment details.
- **Postcondition:** After completing the payment process, the Reader receives a payment confirmation or receipt, and their account status is updated to reflect the paid access or subscription. The Reader gains immediate access to the premium content or subscribed materials.

2.10) Feedback

- **Purpose of Feedback:** The purpose of the "Feedback" use case for a Reader is to allow them to provide feedback, suggestions, or comments regarding their experience, content quality, or any other aspect of the research journal platform. This feedback helps improve the platform and ensures that it meets the needs and expectations of the Readers.
- **Actor:** Reader
- **Precondition:** The Reader is logged into the research journal platform with a registered account and wishes to provide feedback.
- **Input:**

Input Element	Type	Optional/Required	Rules
Reader ID	Text	Required	Unique identifier of the logged-in Reader.
Feedback Type	Dropdown	Required	Type of feedback (e.g., General, Content Quality, Technical Issue).
Feedback Message	Text	Required	Detailed feedback message or comments provided by the Reader.

- **Output:**
 1. **Description:** A confirmation message acknowledging the receipt of the Reader's feedback.
 2. **Destinations of the Outputs:** The confirmation message is displayed to the Reader on their user interface.
 3. **Units of Measure:** Textual information.
 4. **Range of Valid Outputs:** Confirmation Message: A message thanking the Reader for their feedback and confirming that it has been received.
 5. **Report Format:** The output is in the form of a message displayed on the Reader's interface.

- **Post condition:** After providing feedback, the Reader receives a confirmation message, and their feedback is recorded in the system for further analysis and improvement purposes.

2.11) Generate Reports

- **Purpose:** The purpose of the "Generate Reports" use case for a Software Agent is to automate the process of generating various reports and data summaries from the research journal management system. These reports may include statistics on manuscript submissions, reviewer performance, journal usage, or any other relevant metrics. Generating reports assists in decision-making, performance evaluation, and monitoring of the research journal platform.
- **Actor:** Software Agent
- **Precondition:** The Software Agent has access to the research journal management system and the necessary permissions to generate reports.
- **Input**

Input Element	Type	Optional/Required	Rules
Report Type	Dropdown	Required	Select the type of report to generate
Date Range	Date	Optional	Specify a date range for the report (if applicable).
Filters	Text	Optional	Additional filters or criteria.

- **Output:**
 1. **Description:** The generated report in the form of a digital document or file.
 2. **Destinations of the Outputs:** The generated report can be stored in a specified location, sent to relevant stakeholders, or made available for download.
 3. **Units of Measure:** Digital document (e.g., PDF, CSV) containing textual and numerical information.
 4. **Range of Valid Outputs:** Generated Report: A report document with relevant data and statistics.
 5. **Report Format:** The output report format depends on the selected report type but should be well-structured, easy to understand, and may include charts, tables, or graphs.
- **Post condition:** After executing the use case, the Software Agent generates the requested report, which is then available for access, distribution, or analysis as needed. The report is stored or made accessible as specified by the research journal platform's configuration.

2.12) Handle Query

- **Purpose:** The purpose of the use case is to efficiently process and respond to queries, requests, or inquiries from readers related to the research journal management system. This includes handling various types of queries such as user support requests, content inquiries, or system-related questions. Effectively managing queries ensures a smooth user experience and system operation.
- **Actor:** Software Agent
- **Precondition:** The Software Agent is active and monitoring for incoming queries or requests within the research journal management system.
- **Output:**
 1. **Description:** A response or resolution to the query, provided in the form of a message, action, or information.
 2. **Destinations of the Outputs:** The response is sent to the user or entity that initiated the query, typically through the user interface or communication channel.
 3. **Units of Measure:** Textual information, actions.
 4. **Range of Valid Outputs:**
 5. **Query Response:** A message or action addressing the query, which may include providing information, instructions, or taking necessary steps to resolve the query.
 6. **Report Format:** The output response is in the form of a message or action, tailored to the nature of the query.
- **Post condition:** After executing the use case, the Software Agent provides a response or resolution to the query, which may involve actions such as providing information, resolving issues, or communicating with relevant stakeholders. The query is marked as "handled" or "resolved" in the system.

2.13) Accept Payment

- **Purpose of Accept Payment:** The purpose of the "Accept Payment" use case for a Software Agent is to handle and process payments made by users of the research journal platform for services, subscriptions, or access to premium content. This use case facilitates secure and efficient payment transactions, ensuring that users can access paid features and that payments are properly recorded and validated.
- **Actor:** Software Agent
- **Precondition:** The Software Agent is active and ready to process incoming payment requests from users.

- **Input:**

Input Element	Type	Optional/Required	Rules
Payment Type	Dropdown	Required	Select the type of payment method (e.g., Credit Card, PayPal).
Payment Amount	Numeric	Required	The total amount to be paid by the user for a service or product.
Billing Information	Text	Required	Billing information, including name, address, and payment details provided by the user.
User Identifier	Text	Required	Unique identifier of the user making the payment.

- **Output:**

1. **Description:** A payment confirmation or receipt provided to the user, acknowledging the successful payment transaction.
 2. **Destinations of the Outputs:** The payment confirmation or receipt is displayed to the user on their interface, and a record of the payment is stored in the system's database.
 3. **Units of Measure:** Textual information, numerical values.
 4. **Range of Valid Outputs:**
 5. **Payment Confirmation:** A message confirming the successful payment transaction, including details such as transaction ID, payment amount, and timestamp.
 6. **Receipt:** A digital receipt with transaction details, including the user's name, payment method, and transaction ID.
 7. **Report Format:** The output report format is typically in the form of a message or receipt, providing clear information about the payment.
- **Post condition:** After executing the use case, the user receives a payment confirmation, and the payment details are recorded in the system. The user's access to the paid services or content is granted or extended, depending on the nature of the payment.

2.14) Manage Profile

- **Purpose:** The purpose of the "Manage Profile" use case for a Software Agent is to allow users of the research journal platform to view, update, and manage their profile information. This includes actions such as editing personal details, changing contact information, updating preferences, and modifying

login credentials. Managing their profile ensures that users have accurate and up-to-date information associated with their accounts.

- **Actor:**Software Agent
- **Precondition:** The user is logged into the research journal platform with a registered account and wishes to access or modify their profile.
- **Input:**

Input Element	Type	Optional/Required	Rules
User ID	Text	Required	Unique identifier of the user managing their profile.
Profile Information	Text	Optional/Required	Details to be updated or managed in the user's profile, such as name, contact information, or preferences.
New Password (if changing)	Text	Optional	New password if the user chooses to change their login credentials.
Confirmation Password (if changing)	Text	Required	Confirmation of the new password (if applicable).

- **Output:**
 1. **Description:** A confirmation message or profile update status provided to the user, acknowledging successful profile management.
 2. **Destinations of the Outputs:** The confirmation message or profile update status is displayed to the user on their interface.
 3. **Units of Measure:** Textual information.
 4. **Range of Valid Outputs:**
 5. **Profile Updated:** A message confirming that the user's profile information has been successfully updated.
 6. **Error Message:** If there are issues with the update (e.g., password mismatch), an error message indicating the problem.
 7. **Report Format:** The output is typically a message or status update shown on the user's profile interface.
- **Post condition:** After executing the use case, the user's profile information is updated as per their request. If the user has changed login credentials, the new credentials are validated and recorded. The user is informed of the update status.

2.15) Sign in

- **Purpose:** to register new user into the system.
- **Actors:** Authors.
- **Precondition:** The user has not to be previously registered in the system.
- **Inputs:**

Input Element	Type	Optional/Required	Rules
Query Type	Alphanumeric	Required	Character length should be in between 5 to 10
Password	Alphanumeric	Required	Character length should be in between 5 to 10

- **Outputs:** A message which will show whether the user has successfully logged in the system or not. In case of unsuccessful login the login page will be refreshed along with the message. In case of successful login the homepage will come along with the message.

2.16) Ask Query

- **Purpose:** to ask about metadata or details about the manuscript.
- **Actors:** Readers
- **Inputs:**

Input Element	Type	Optional/Required	Rules
Query Type	Dropdown	Required	Select from the menu
Requester id	Alphanumeric	Optional	Character length should be in between 5 to 10

Chapter 3

Non-functional requirements

3.1) Performance Requirements:

-Response Time:

1. Page Loading: 1-3 seconds
2. Search Queries: 1-5 seconds
3. Submission Processing: 5-10 seconds
4. User Authentication: 1-3 seconds

3.2) Security Requirements:

- The password should be kept securely.
- Data Encryption: RSA (Rivest-Shamir-Adleman) encryption.
- Data Backup and Recovery should be there for data backup and recovery in case of data loss in drives.

3.3) Usability Requirements:

- User Interface: must be simple and easy to use.
- Accessibility: must be accessible from pc and phones

3.4) Compatibility Requirements:

- Browser Support: system should be loaded in the most commonly use browsers.
- Operating Systems: should be run on both windows and Linux

3.5) Integration Requirements:

- Third-party Services: Specify integration with payment gateway.

Chapter 4

Appendices

- Login use case number 4
- Submit the manuscript use case number 1
- New Version publication request use case number 2
- Recruit Reviewer use case number 5
- Give Reward Points to reviewers use case number 6
- Review submitted manuscript use case number 15
- Accept Reviewing request from editor use case number 16
- Search for Manuscript use case number 8
- Accept Payment use case number 13
- Manage Profile use case number 14
- Accept Payment use case number 13
- Manage Profile use case number 14
- Payment use case number 3
- Feedback use case number 7
- Generate Reports use case number 11
- Handle Query use case number 12
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