MINISTRY OF INNOVATION AND TECHNOLOGY

In Collaboration with

ADDIS ABABA INSTITUTE OF TECHNOLOGY
SCHOOL OF ELECTRICAL AND COMPUTER ENGINEERING

V YEAR : COMPUTER STREAM

Proposal for:
> MinT National Research Portal

Proposal title:
> National Research Portal

Prepared by:

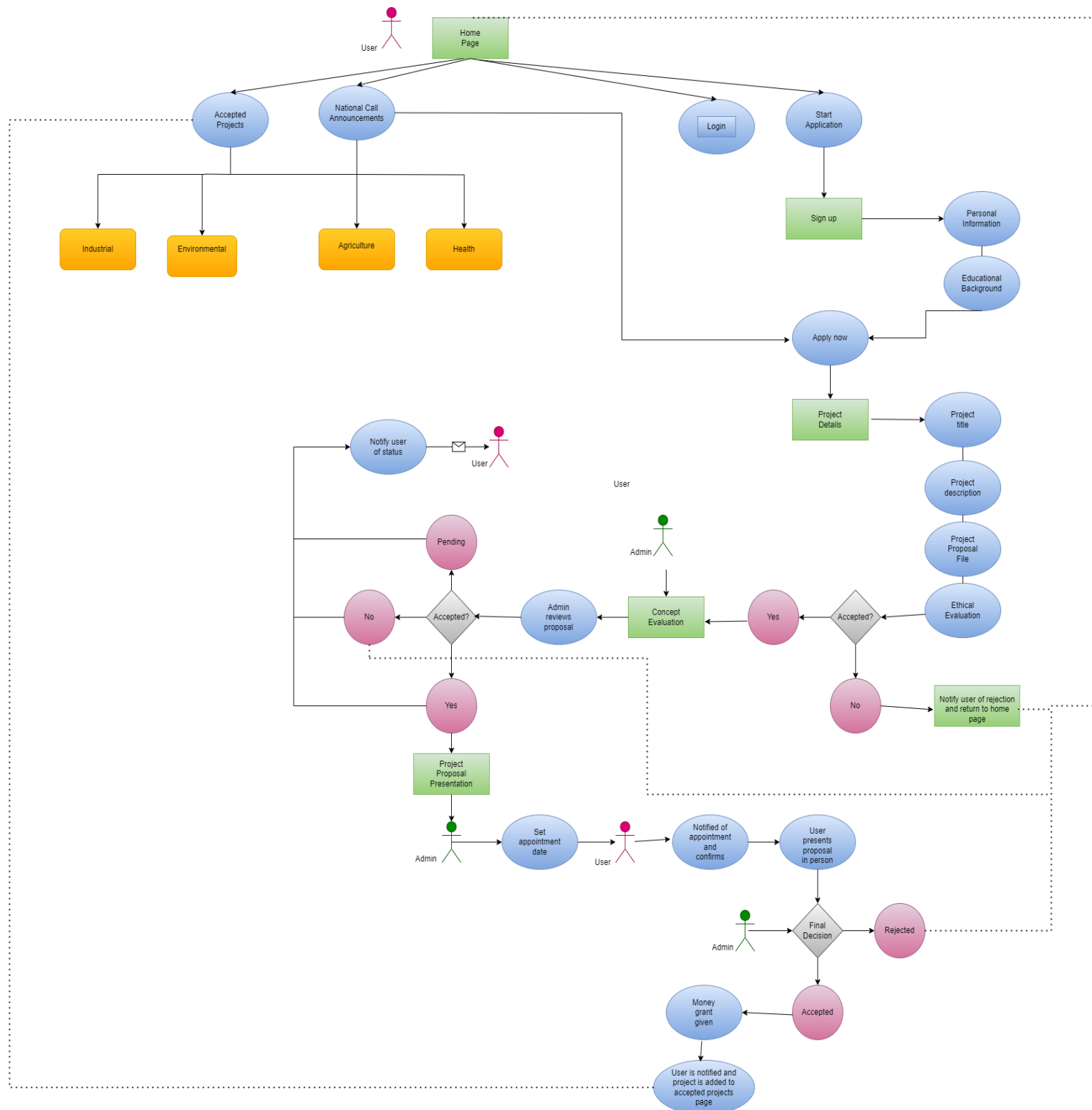| Name	ID No
1. Adam Abera	UGR/0936/12
2. Adane Eshete	UGR/3760/12
3. Ebisa Adugna	UGR/7063/12
4. Emnet Mamo	UGR/0545/12
5. Teklemariam Shewamnil	UGR/3795/12
6. Yinges Damtie	UGR/7186/12

Advisor : Ayana Murad

Figure: Overall structure of the National Research Portal

1.National Call Announcement

Use Case: Administrator add an announcement for a national call for research in either of the four topics(Agriculture, Environment, Health, Industrial)

Actors: Administrator (Worker at Ministry)

Preconditions:
➔ The administrator is logged in.

Main Success Scenarios:

1. The administrator enters the advertisement submission page.
2. The system displays a submission form, prompting the administrator to enter details about the advertisement.
3. The administrator fills out the submission form, including the following information:
   ➢ Topic or field of the research advertisement.
   ➢ Description and requirements of the advertisement. This should include:
      - The amount of money that will be awarded.
      - The deadline for submission.
      -Problem statement (if any).
4. The administrator reviews the information they have entered.
5. The administrator clicks the "Submit" button.
6. The system validates the submission for completeness..
7. If the submission is incomplete:
   - The system displays an error message explaining the issue.
   - The administrator is given the opportunity to correct the submission.
   - The process returns to step 4.
8. If the submission is valid:
   - The system stores the submission in a secure database.
   - The user will be able to see the advertisement on the homepage.

Failure Scenarios:

➔ If the administrator decides to cancel the submission at any point, they can click a "Cancel" button, and the submission process ends.
➔ If there are technical issues during submission (e.g., server errors), the system should handle these gracefully and provide error messages or instructions for the administrator to try again.

2. Personal Information and Educational Background

Objective:

The use case for personal information and educational background validation revolves around ensuring that users provide accurate and complete personal information and meet specific educational qualifications criteria when registering for a service or applying for a particular opportunity. This process aims to maintain data accuracy, verify users' educational qualifications, and streamline decision-making based on these details.

Main Success Scenarios:

1. User Registration/Application:
   - Users initiate the registration or application process, typically on a website or through an application form.

2. Personal Information Input:
   - Users are prompted to enter the following personal information:
     - **Full name with grandfather's name**.
     - **Gender.**
     - **Phone number**.
     - **Nationality**.
     - **Upload photos.**

3. Educational Background Input:
   - Users are required to provide their educational background details, including:
     - Educational level (e.g., master's degree or above, specified as "**MA**").
     - Information about the institution(s) attended, including **names** and **dates**.
     - Curriculum Vitae(**CV**).

4. Data Validation:
   - The system or administrators validate the provided information to ensure it meets the specified criteria.
   - Personal information is checked for completeness, correctness, and conformity with established naming conventions.
   - Educational background is verified to meet the requirement of holding a master's degree or higher.

5. Decision-Making:
   - Based on the validation results, institutions determine whether the user's application or registration can proceed.
      - If the user meets the criteria, they may advance to the next stage.
      - If there are discrepancies or incomplete information, they may be asked to rectify or complete the details.

6. Data Storage:
   - The validated personal information and educational background are securely stored in the system for future reference or processing.

7. Acceptance/Rejection:
   - Users are informed about the outcome of their registration or application, which can include acceptance, rejection, or requests for additional information or appointment to make sure that one person does not have multiple accounts.

Failure Scenarios:

1. Invalid Educational Background:
   - User provides educational background details that do not meet the master's degree (MA).
   - The system validates the personal information but rejects the application due to the educational qualification not meeting the criteria.
   - Users are informed that they do not meet the educational requirement.
   - Registration/application is not processed further.

2. Incorrect Personal Information:
   - User provides inaccurate personal information, including incorrect names, gender, phone number, or nationality.
   - The system validates the educational background but flags the inaccuracies in personal information.

3. Missing Educational Details:
   - User provides correct and complete personal information.
   - User fails to provide educational background details.
   - The system validates the personal information but rejects the application due to the missing educational background information.

3.Project title and Ethical consideration

Use Case: User Submits an Innovative Idea on either of the four topics(Agriculture, Environment, Health, Industrial)

Actors: Contest Participant

Preconditions:

➔ The user has access to the website and is logged in.
➔ The user has a unique and innovative idea that they want to submit.
➔ Users must be of Ethiopian nationality.

Main Success Scenarios:

1. The user navigates to the contest submission page.
2. The system displays a submission form, prompting the user to enter details about their innovative idea.
3. The user fills out the submission form, including the following information:

➢ Title of the innovative idea.
➢ Description of the innovative idea. This should include:
  - The problem or challenge the idea addresses.
  - The solution or concept proposed by the idea.
  - Unique features or aspects of the idea.
  - How the idea aligns with the contest's theme of creativity and innovation.
  - Potential Impact: An explanation of the potential impact of the idea, including any expected benefits, societal or environmental considerations, or disruptive factors.
➢ document attachment (proposal).
➢ An option to specify the category or theme of their idea (either of the four above only).
➢ An acknowledgement checkbox for agreeing to the website's ethical guidelines. These includes the following ethical values:

A. Compliance with Contest Rules: Participants are expected to comply with all contest rules and guidelines, including but not limited to:
  - Submission deadlines.
  - Eligibility criteria.
  - Content and format requirements.

B. Respect for Intellectual Property: Participants must ensure that their innovative ideas do not infringe upon the intellectual property rights of others. This includes avoiding plagiarism, copyright violations, or unauthorised use of third-party materials.

C.Non-Harmful or Offensive Content: Participants should refrain from submitting ideas that are harmful, offensive, or discriminatory in nature. Ideas promoting violence, hate speech, or any form of harm to individuals or groups will not be accepted.

D.Privacy and Data Protection: Participants should respect privacy and data protection laws when submitting their ideas. Any data collection or processing related to the idea must comply with relevant regulations, and participants should obtain necessary consent when applicable.

E. Environmental and Social Responsibility: Ideas should consider their potential environmental and social impact. Solutions that contribute positively to environmental sustainability and social well-being are encouraged.

F.Transparent and Truthful Representations: Participants should provide accurate and truthful information in their submissions. Misrepresentation, false claims, or deceptive practices are not allowed.

G.Human and animal protection: The research must respect human right and unlawful,illegal and unnatural activity on animals

4. The user reviews the information they have entered.

5. The user clicks the "Submit" button.

6. The system validates the submission for completeness and compliance with ethical guidelines.

7. If the submission is incomplete or violates ethical guidelines:
   - The system displays an error message explaining the issue.
   - The user is given the opportunity to correct the submission.
   - The process returns to step 4.

8. If the submission is valid:
   - The system stores the submission in a secure database.
   - The user receives a confirmation message indicating that their idea has been successfully submitted.
   - The system may provide a unique identifier or reference number for the submission.

Failure Scenarios:

➔ If the user decides to cancel the submission at any point, they can click a "Cancel" button, and the submission process ends.

➔ If there are technical issues during submission (e.g., server errors), the system should handle these gracefully and provide error messages or instructions for the user to try again.

4. Concept Evaluation

Use Case: Administrator receives project proposals that have passed the ethical approval stage and evaluates the project's concept.

Actors: Administrator (Worker at Ministry)

Preconditions:
➔ The administrator is logged in.
➔ The proposal has been sent to the administrator after passing the ethical evaluation.

Main Success Scenarios:

1. The administrator chooses a proposal to evaluate.

2. The system displays the submitted file to the administrator.

3. The administrator evaluates the concepts based on the required criteria.

4. The administrator and other ministry workers discuss the concept and come to a decision..

5. The administrator clicks the "Accept" or "Reject" button.

6. The system registers the response and automatically notifies the user about their status.

7. While the proposal is still under discussion or review, the user will be shown a pending status:

   - The system shows the user the pending status on their dashboard...

8. If the status given to the user is acceptance:

   - The user will pass to the presentation phase held in person..

9. If the status given to the user is rejection:

   -    The user will be notified and sent to the home page.

 Failure Scenarios:
   ➔ If the administrator does not give a decision until a certain number of days before the deadline, the system will try to notify the administrator.
   ➔ If there are technical issues during submission (e.g., server errors), the system should handle these gracefully and provide error messages or instructions for the administrator to try again.

5. Project proposal presentation

Main Success Scenario:

1.User Submission of Project Proposal After Meeting Preconditions:
   ● The user, having logged in to the platform, passed the application form requirements (including educational background, nationality), and successfully passed the concept evaluation, receives a call for presentation.

2. Successful Presentation:
   ● The user prepares a presentation based on their project proposal and delivers it to the evaluation committee as part of the call for presentation.

3. Proposal Evaluation and Acceptance:
   ● The submitted project proposal, along with the presentation, undergoes thorough evaluation   based on predefined criteria, considering aspects like feasibility, impact, and alignment with grant objectives.

4. Notification of Proposal Acceptance:
   ● If the project proposal, along with the presentation, meets the criteria and is accepted, the user is notified through the platform and receives detailed instructions on how to proceed with the grant application.

5. Successful Grant Application:
   ● Following the instructions, the user submits a grant application, providing the required information and documentation.

6. Grant Distribution Process:
   ● The system securely processes the grant application and initiates the grant distribution process.

7. Confirmation of Grant Distribution:
   ● Once the grant is approved and successfully processed, the user receives a notification confirming the successful grant distribution.

Failure Scenarios:

1. Technical Error During Presentation Submission:
   ● Failure: The user encounters a technical error while trying to submit their presentation.
   ● Cause: This issue could arise from system glitches or network problems.
   ● Response: The system presents an error message to the user, advising them to attempt the submission again. If the problem persists, it instructs the user to contact support for assistance.

2. Project Proposal and Presentation Rejection:
   ● Failure: The project proposal and presentation are rejected after evaluation, despite meeting the preconditions.
   ● Cause: The proposal and presentation may not align with the grant criteria or other evaluation factors.
   ● Response: The system sends a rejection notification to the user, outlining the reasons for the rejection. It offers guidance on how the user can enhance their proposal and presentation for future submissions.

3. Rejection of Grant Application:
   ● Failure: The user's grant application is rejected even after meeting the preconditions and submitting the required information.
   ● Cause: Missing documentation or issues with the provided information could lead to rejection.
   ● Response: The system notifies the user of the grant application rejection, specifying the reasons. It provides instructions on how to address the issues and reapply if necessary.

4. Technical Payment Error During Grant Distribution:
- Failure: A technical error occurs during the grant payment process.
- Cause: This could be due to payment gateway issues or other technical glitches.
- Response: The system notifies the user about the payment error, instructing them to review their payment details. It also offers support for resolving the issue to ensure successful grant distribution.

5. Security Incident or Data Breach:
- Failure: A security incident or data breach takes place, potentially compromising user data.
- Cause: Cyberattacks or vulnerabilities in the platform's security measures could lead to such incidents.
- Response: The platform identifies and mitigates the security breach, promptly notifies affected users, and takes necessary measures to enhance security and prevent future incidents.

6. Accepted Project Publication

Actor: The actor would typically be a user or an administrator who has the authority to publish projects.This actor can be a project manager, a content editor, or any authorized personnel responsible for managing and publishing projects on the website.

Precondition: The project that is going to be published must pass the project proposal stage.

Main Success Scenario:
1. The user navigates to the project publication page on the website.
2. The website displays a list of four sectors that are agriculture, environment, health and industrial and also recently accepted projects.
3. The user selects the option to publish their project.
4. The website prompts the user to provide the necessary details of their project, including title, description, team members, and project files.
5. The user fills in the required information and uploads the project files.
6. The website validates the submitted information and files.
7. If all the information is valid, the website publishes the project on the project publication page.
8. The website confirms the successful publication and provides a confirmation message.
9. The published project is now visible to other users on the project publication page.

Failure or Alternative Scenarios:

1. Invalid or Missing Information:
   - If the user fails to provide the required information or provides invalid data, the website displays an error message indicating the missing or invalid fields.
   - The user is prompted to correct the errors and resubmit the project details.

2. File Upload Failure:
   - If the user encounters an issue while uploading the project files, such as file size exceeding the limit or file format not supported, the website displays an error message specifying the problem.
   - The user is prompted to resolve the issue and retry the file upload.

3. Technical Difficulties:
   - If the website experiences technical difficulties during the publication process, such as server errors or database connection issues, the website displays an error message indicating the problem.
   - The user is advised to try again later or contact the website administrator for assistance if possible.

4. Duplication Check:
   - Before publishing the project, the website might perform a duplication check to ensure that the submitted project is not a duplicate of an existing publication.
   - If the submitted project is found to be a duplicate, the website displays an error message informing the user about the duplication.
   - The user may be prompted to review their project details or contact the website administrator for further instructions.

5. Review Process:
   - In some cases, the website may require a review process before accepting and publishing a project.
   - If the project fails to meet the criteria or guidelines set by the website, it may be rejected.
   - The website sends a notification or email to the user, explaining the reason for rejection and providing guidance for resubmission if applicable.