Software Requirements Specification

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Faculty Portfolio Management

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1.0. Introduction

1.1. Purpose

The purpose of this document is to present a detailed description of the Faculty Portfolio Management System. It will explain the purpose and features of the system, the interfaces of the system, what the system will do, the constraints under which it must operate and how the system will react to external stimuli. This document is intended for both the stakeholders and the developers of the system and will be proposed to the Regional Historical Society for its approval.

1.2. Scope of Project

This software system will be a Faculty Portfolio System for a department of a local college. More specifically, this system is designed to allow HOD to manage the Faculties and the Research Papers they have submitted. The system also contains a relational database containing a list of Faculties, their details and the Research papers they have published.

2.0. Literature Survey

A portfolio is a place where you keep examples of work that you are proudest of.

Many authors in different countries have given their point of views related to portfolios in their ***Research paper..***

Many authors studied the formation of an optimization portfolio.

We find papers on google through which we first learn what exactly is needed to develop a portfolio.That helped us to get an idea about developing a portfolio system.

With the help of those research papers we have been able to analyze our requirements for portfolio management.

They suggested books or websites that we followed.

3.0. Overall Description

3.1. HOD use case

HOD would be able to add new faculties, remove faculties, update their information and view all the research papers submitted by the faculties.

3.2. Faculty use case

Faculty would be able to update their information, submit research papers, delete research papers.

3.3. Admin use case

Admin would be able to add faculties, delete faculties and update their information.

4.0. Functional Requirements

4.1. Add Faculty

Faculties can be added by the HOD.

Step 1: To add faculty first HOD needs to login

Step 2: Enter details about the faculty needs to be added.

The details include:

- ID : It is auto generated
- Name
- Qualification
- Certificate : It is needed for Verification of the Qualifications
- DOB
- Contact No.

Step 3: Submit and the record will be updated in the database

4.2. Update Faculty Information

Faculty information can be updated by HOD and Faculty.The *Update* use case requests a list of names, ID, Qualification(Necessary Field), Certificate(Necessary Field), Date Of Birth and Contact Number when adding a new Reviewer. It returns a Boolean for status when updating the Database.

Step 1: Login by Faculty or HOD

Step 2: Select which Faculty details needs to be updated

Step 3: Modify the information

Step 4: Submit and the database will be updated

4.3. Submit Research Paper

Research papers will be submitted by HOD and Faculty.

Step 1: Login by Faculty or HOD

Step 2: Enter ID and details about the research paper

Step 3: Upload the research paper in pdf format

Step 4: Submit and the record will be added in database

4.4. Search for Research papers

HOD can search for research papers using

Step 1: Login by Faculty or HOD

Step 2: Enter ID or name of faculty whose research paper is to be viewed

Step 3: View the research papers

4.5. Delete a Faculty

HOD can delete a faculty record.

Step 1: Login by Faculty or HOD

Step 2: Enter ID and details about the faculty which needs to be deleted

Step 3: Submit

Step 4: Record will be deleted from the database

4.6. Remove Research paper

Research papers can be removed by HOD or Faculties.

Step 1: Login by Faculty or HOD

Step 2: Enter ID and details about the research paper which needs to be deleted

Step 3: Submit

Step 4: Record will be deleted from the database

4.7. View Faculty Information

Information about the faculty

Step 1: Login by Faculty or HOD

Step 2: Enter ID and details about the faculty which needs to be viewed

Step 3: Submit

Step 4: Record will be fetched from the database and displayed on screen.

Faculty Table

Data Item	Type	Description	Comment
Id	varchar(10)	Faculty's ID	Unique and Primary Key
Name	varchar(30)	Faculty Name	
Qualification	varchar(15)	Faculty's Qualification	Necessary Field
Certificate	Longblob	Certificate of the qualification	Necessary Field
DOB	Date	Date of Birth	Should be yyyy-mm-dd
Contact Number	Bigint	Faculty's Contact Number	Should be 10 digit number

Research Paper Table

Data Item	Type	Description	Comment
Id	varchar(10)	Faculty's Id	Unique and Primary Key
Research Paper	Longblob	Stores the pdf	

Login Table

Data Item	Type	Description	Comment
Id	varchar(10)	Faculty's Id	Unique and Primary Key
passwd	varchar(15)	Password	should not be null at least 8 character long

5.0. Non-Functional Requirements

- **Efficiency**

  The end goal should be achieved with little to no waste, effort, or energy.

- **Desirable**

  It should fully fill users with all requirements.

- **Quick responses**

  The software should respond to the given inputs quickly

6.0 System Requirements

- Windows 11
- VS CODE
- PYTHON

7.0 Diagrams

7.1. ER Diagram

The E-R Diagram constitutes a technique for representing the logical structure of a database in a pictorial manner. This analysis is then used to organize data as a relation, normalizing relation and finally obtaining a relation database.

- *ENTITIES: Which specify distinct real-world items in an application.*

- *PROPERTIES/ATTRIBUTES: Which specify properties of an entity and relationships.*

- *RELATIONSHIPS: Which connect entities and represent meaningful dependencies between them.*

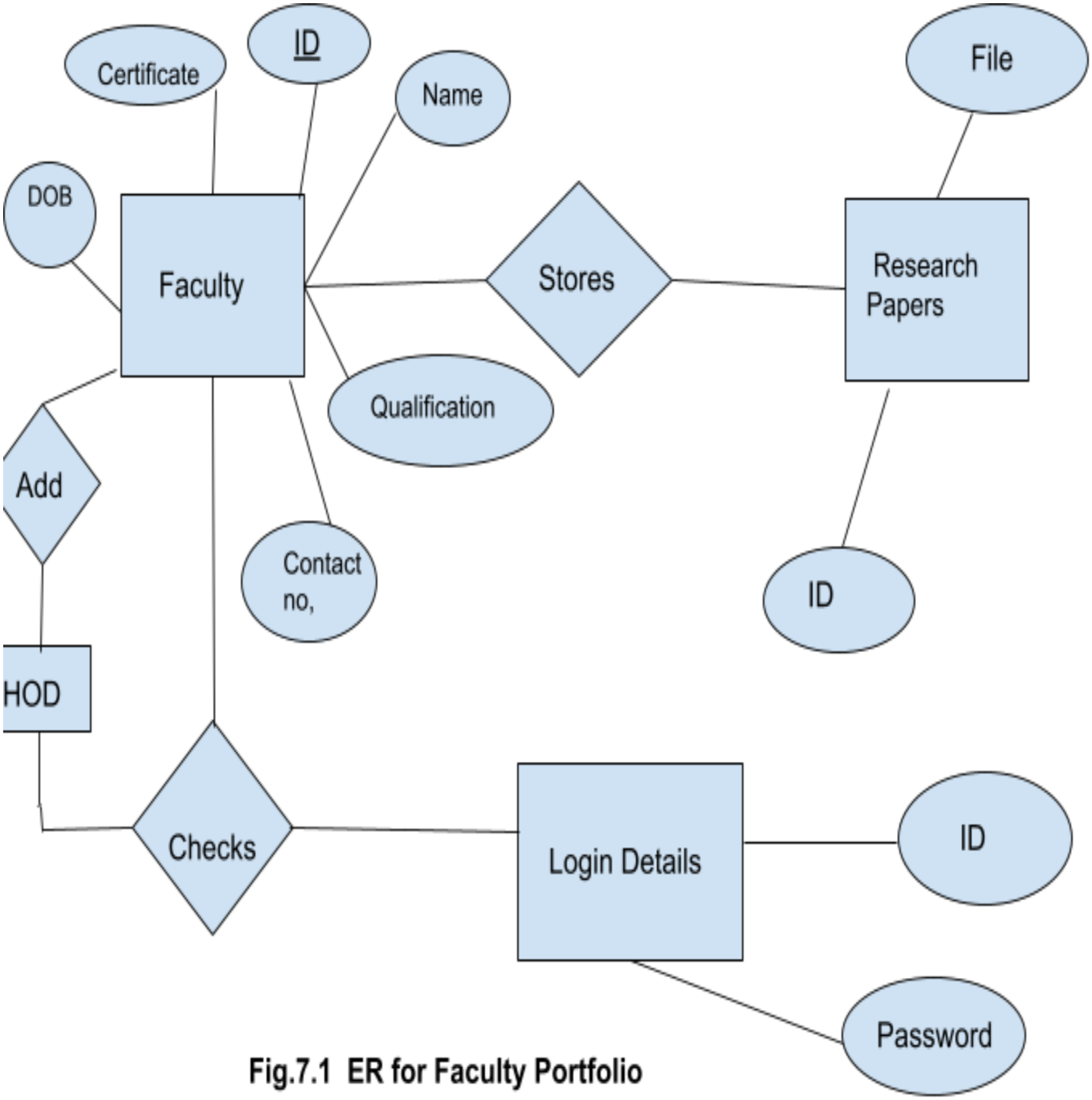

Fig.7.1 ER for Faculty Portfolio

7.2 Use Case Diagram

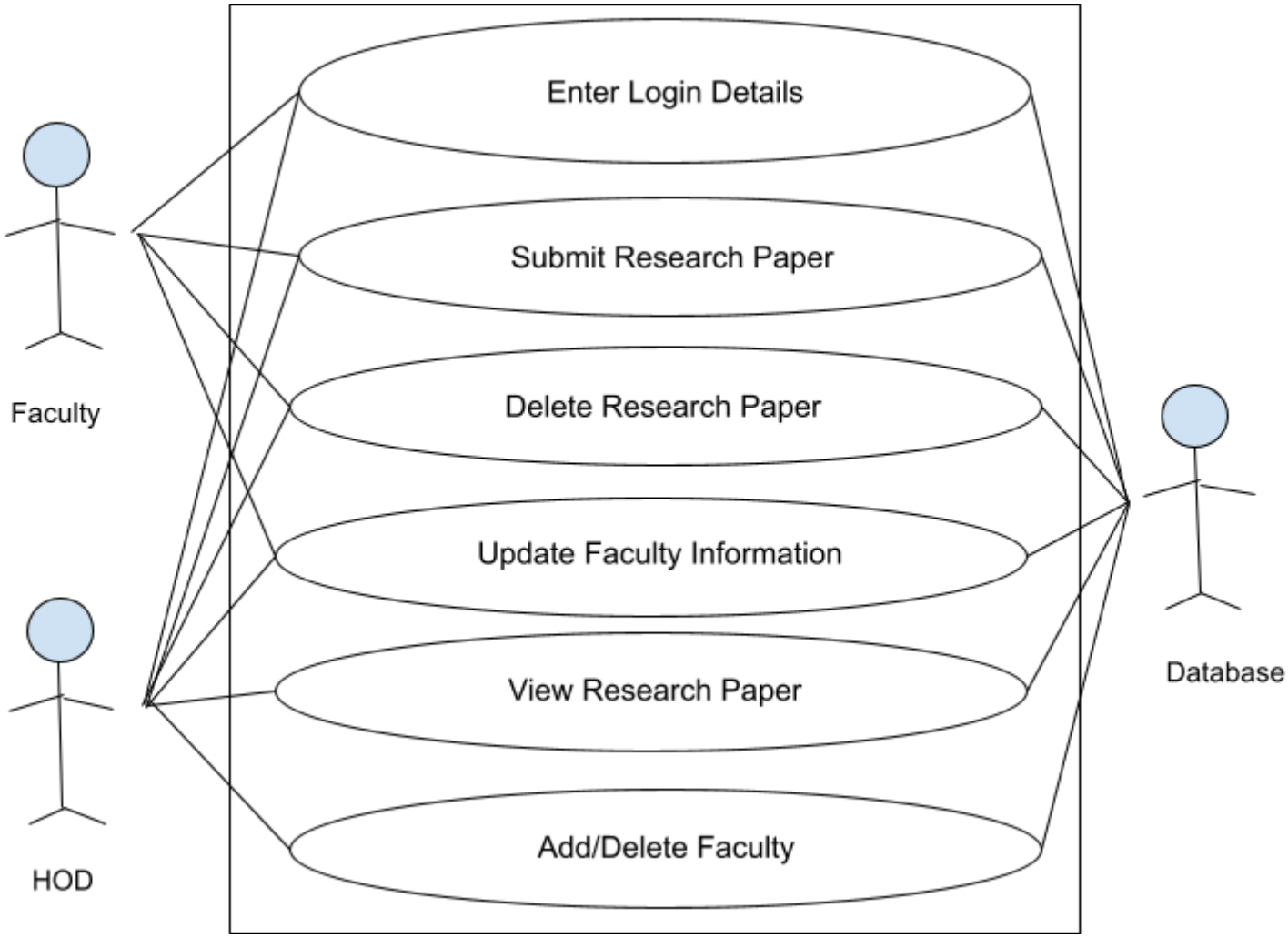

Fig.7.2 Use Case Diagram for Faculty Portfolio

7.3 Data Flow Diagram

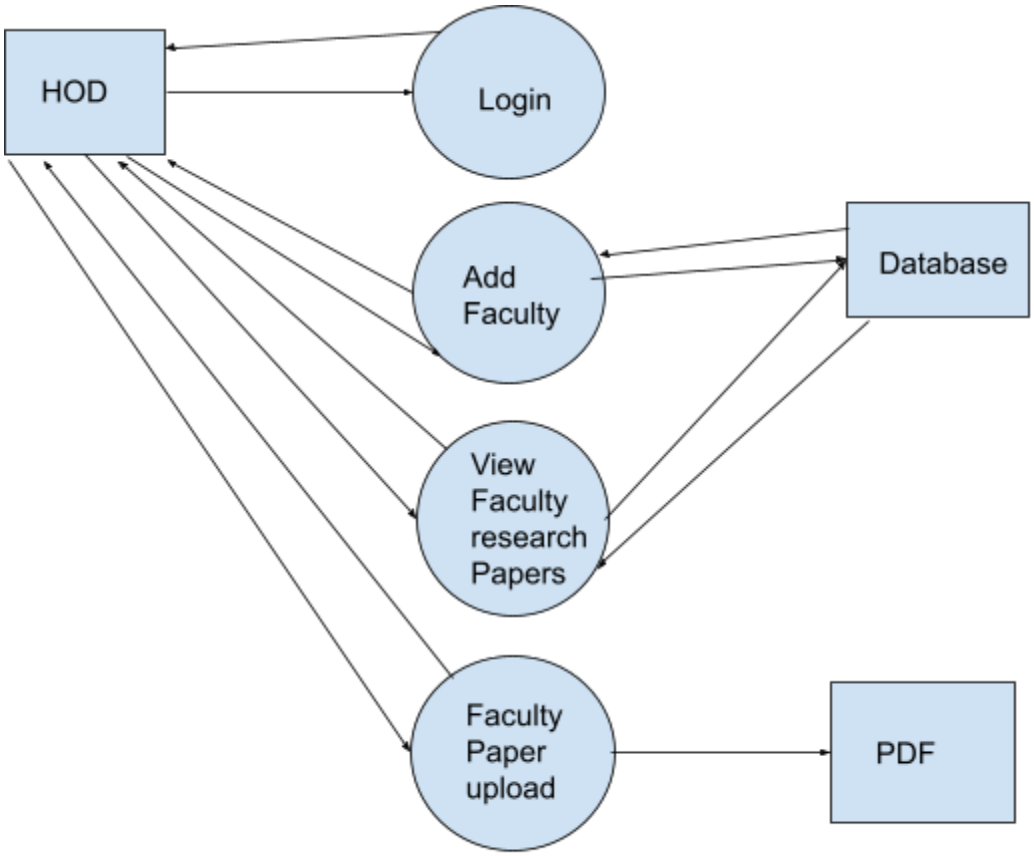

Fig 7.3.Data Flow Diagram

8.0. Testing Plan/Strategy

8.1. Test Cases

Sr.No	Test Case	Expected output	Output
1.	The username entered is wrong.	Display “user not registered.”	Displayed“user not registered.”
2.	Password entered is wrong.	Display “Incorrect password.”	Displayed “incorrect password.”
3.	User is not registered.	Display “user not registered”.	Displayed “user not registered”.
4.	No details entered on the login page.	Display “please fill out the details.”	Displayed “please fill out the details.”
5.	If faculty tried to login through HOD login.	Display “User not registered.”	Displayed“User not registered.”
6.	No research paper is uploaded.	Display “None”on the faculty information page.	Displayed “None”on the faculty information page.

9.0 Project Plan

Task	W1	W2	W3	W4	W5	W6	W7	W8	W9	W10	W11	W12	W13	W14
Decide and initiate project														
Literature Survey														
Gathering Requirements														
Writing SRS														
Implementation														
Testing														

10.0.References

IEEE. *IEEE Std 830-1998 IEEE Recommended Practice for Software Requirements Specifications.* IEEE Computer Society, 1998.