

DATABASE MANAGEMENT SYSTEM (UE21CS351A)

RESEARCH PUBLICATION MANAGEMENT SYSTEM

USER REQUIREMENTS SPECIFICATION DOCUMENT

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Introduction

Purpose of the Project:

The purpose of this project is to streamline the process of collecting and managing scholarly publications of college faculty members from Google Scholar.

Scope of the Project:

The project will involve web scraping, data storage in a database, and a user-friendly frontend for accessing and visualizing the collected data.

Project Description

Project Overview:

This mini-project aims to automate the collection of publications from Google Scholar, store the data in a database, and provide a web-based interface for faculty members to access and explore the publications easily.

Major Project Functionalities:

The key functionalities include web scraping, data storage, user authentication, publication search, and visualization.

System Features and Function Requirements

System Features

1: Web Scraping

This feature involves scraping scholarly publications from Google Scholar.

It requires: The ability to input faculty members' names or profile urls for scraping.

A web scraping mechanism to extract publication data (title, authors, abstract, publication date, etc.) from Google Scholar.

2: Data Storage

This feature involves storing the scraped data in a database.

It requires: Database design to accommodate publication data

Integration with a database management system.

Scheduled updates to keep the database current.

3: Publication Search

Allow users to search for publications.

It requires: A search interface with options to filter by author, publication year, keywords, etc.

Quick and relevant search results based on user queries.

Advanced search capabilities like Boolean operators.

4: Frontend Visualization

Provide a user-friendly frontend to access and visualize the collected publications.

It requires: An intuitive user interface with responsive design.

Publication details view with links to full articles.

Additional Requirements

Scalability:

The system should be designed for future expansion to accommodate a growing number of faculty members and publications.

User Training:

Provide training resources and documentation to assist users in effectively using the system.

Maintenance:

Plan for regular maintenance, updates, and bug fixes to ensure the system's continued functionality.

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