Project Proposal Report

For

Study Abroad Preparation System

Course Title: Software Engineering Design Capstone Project

Course Code: SE 331

Submitted To

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1. Introduction

Studying abroad has become an increasingly popular option among students seeking better academic opportunities, global exposure, and improved career prospects. However, the preparation process for studying abroad is often complex, time-consuming, and confusing due to the involvement of multiple requirements such as university selection, program eligibility, documentation, financial planning, and country-specific regulations. Many students struggle to manage this information efficiently, leading to missed opportunities, poor decisions, or reliance on informal and unreliable sources.

Our proposed Study Abroad Preparation System aims to address these challenges by providing a centralized, structured, and user-friendly digital platform that assists students throughout the initial stages of their study abroad preparation journey.

1.1 Background Overview

Application Domain: Education Technology (EdTech)

It focuses on international higher education planning and student decision support systems.

Current Practices and Existing Systems

Currently, students preparing to study abroad rely on a combination of:

- University websites scattered across different countries

- Education consultancy offices

- Online forums, social media groups, and unofficial blogs

- Spreadsheets or handwritten notes to track requirements

While some educational portals and consultancy websites exist, they often:

- Provide incomplete or country-specific information

- Focus more on marketing rather than structured guidance

- Lack personalization based on student preferences

As a result, students must manually search, compare, and organize information from multiple sources, which increases confusion and possibilities of errors.

1.2 Problem Statement

The main problem is the absence of an integrated system that supports students throughout the entire study abroad preparation process. Existing solutions are either incomplete, country-specific, or heavily dependent on third-party agents.

The major limitations of existing approaches include:

- Scattered information across multiple platforms

- Lack of structured comparison between universities and programs

- Absence of a centralized checklist for preparation requirements

- Difficulty in managing and tracking preparation progress

- Overdependence on manual effort and informal guidance

These issues primarily affect students planning to pursue higher education abroad, especially those who are first-time applicants and lack access to professional counseling services. Therefore, there is a clear need for a software-based system that can organize, store, and present study abroad preparation information in a structured, accessible, and scalable manner.

1.3 Objectives

General Objective

- To provide a centralized web-based digital platform for managing study abroad preparation information.

- To assist students in organizing and accessing information related to foreign universities, academic programs, basic eligibility and language requirements, study abroad preparation steps

- To reduce the reliance on scattered and unstructured information sources by presenting data in a structured and user-friendly manner.

- To support students in making informed and organized decisions during the initial stages of study abroad planning.

1.4 Scope

In-Scope Features:

- User registration and login for students

- Student profile management (basic academic and preference details)

- Browsing and searching foreign universities based on: Country, Degree level, Field of study

- Viewing detailed information about: Universities, Offered programs, Tuition ranges and duration

- Country-wise organization of universities

- Basic recommendation of universities based on student preferences (rule-based logic)

- Admin module for:

    o Managing countries, universities, and programs
    o Updating or correcting stored data

Out-of-Scope Features:

- Real-time synchronization with official university databases

- Online application submission to universities

- Admission decision processing or offer letter generation

- Visa application processing or embassy communication

- Direct interaction with universities or admission offices

- Financial transactions or payment processing

System Boundaries:

- The system focuses only on the preparation and planning phase of studying abroad.

- University and program data will be manually curated and maintained through an admin interface.

- The system provides decision-support information, not official admission or legal advice.

1.5 Stakeholders

Students (End Users)

Role: Use the system to explore universities and programs and organize preparation information.

Interest: Accessing structured, reliable, and easy-to-understand study abroad information from a single platform.

Project Team (Developers)

Role: Design, develop, test, and maintain the system.

Interest: Successfully delivering a functional, scalable, and well-documented academic project.

System Administrators

Role: Manage and maintain the university, program, and country data stored in the system.

Interest: Ensuring data accuracy, consistency, and system usability.

Academic Instructor

Role: Use the app to guide students, track application progress, and provide recommendations.

Interest: Ensuring the best university and program's choice based on students preferences, tuition fees, language test score etc.
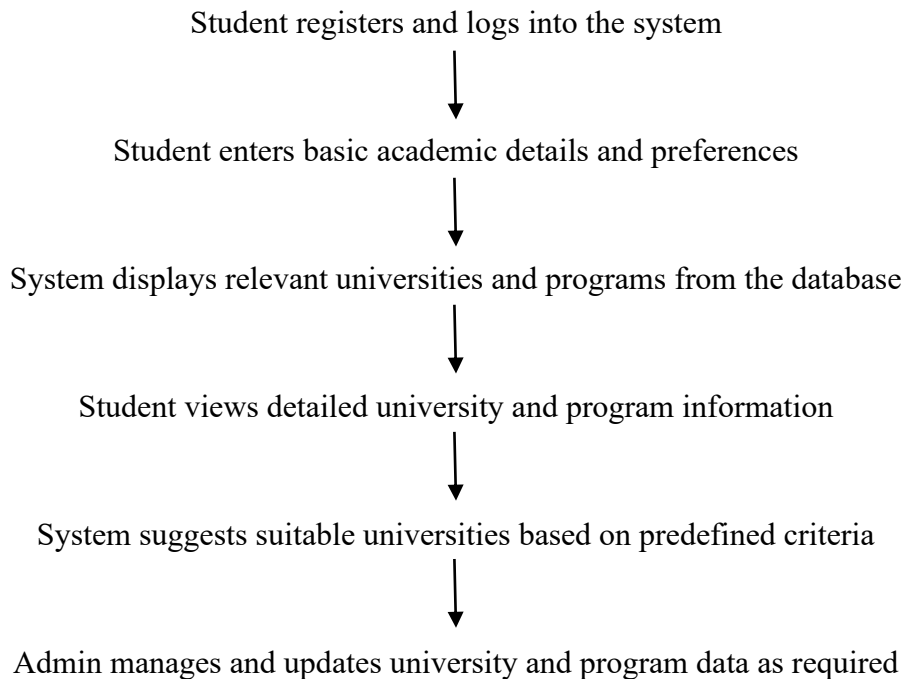
1.6 Proposed Solution

- Provides a centralized platform that consolidates study abroad-related information.

- Replaces fragmented and manual information gathering with a structured database-driven system.

- Helps students compare universities and programs based on relevant criteria.

- Reduces confusion and preparation errors through organized and accessible data.

Key System Features

- Secure student authentication and profile management

- University and program search with filtering options

- Country-wise organization of study abroad options

- University recommendation based on student preferences

- Admin-controlled data management system

- Scalable database design supporting future expansion

Overall Workflow

Student registers and logs into the system

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Student enters basic academic details and preferences

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System displays relevant universities and programs from the database

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Student views detailed university and program information

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System suggests suitable universities based on predefined criteria

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Admin manages and updates university and program data as required

2. System Requirements

The system shall allow users to:

- Register and log in.

- Create and update a student profile.

- View a list of available countries.

- Browse universities by country.

- View university details.

- View programs offered by a university.

- Filter universities based on preferences.

- Use the system in multiple languages.

- The system allows administrators to add, update, and delete university data.

- The system will store all data in a relational database.

3. Tools and Technologies

Programming Languages

- JavaScript
- SQL

Frameworks and Libraries

- React
- Node.js
- Tailwind CSS

Database

- PostgreSQL (via Supabase)

4. Project Timeline and Work Plan

Milestone	Tasks	Team Member
Week 1	Project proposal, planning	Everyone
Week 2	Requirement analysis, SRS	Everyone
Week 3	Database design	Kawshik Saha
Week 4	Backend development	Munjurul Islam
Week 5	Frontend development	Fazly Rabby
Week 6	Testing and bug fixing	Everyone
Week 7	Documentation	Everyone
Week 8	Final submission and demonstration	Everyone

5. Optional Sections

Existing System

    - Information is scattered across multiple websites and sources.

    - No centralized preparation platform exists.

System Architecture

    - Client–server architecture.

    - Web-based frontend with REST APIs.

Ethical, Legal, and Social Considerations

    - Uses publicly available information only.

    - No personal or sensitive data misuse.

    - No data scraping or automation.

Future Work

    - Expansion to more universities and countries

    - Enhanced user interface and analytics

    - AI-based improved university recommendations

    - Chatbot-based guidance system

    - Mobile application version