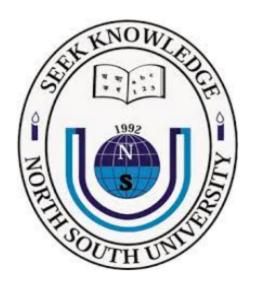# North South University

Project Report

NSU Study Portal

Faculty

Md. Mosaddek Khan

Submitted by -

Monirul Islam Mahmud - 2011839042

Hafeza Akter - 1922175042

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NSU Study Portal

Introduction

A web program called the NSU Study Portal was created by Monirul Islam Mahmud and Hafeza Akter to give students and book enthusiasts easy access to a variety of books. Users can utilize the portal's book search feature to look for books using a variety of criteria. The NSU Study Portal is described in this paper in a broad manner, along with the software stack used, the programming language used, and the difficulties encountered throughout the project's development. Users can access comprehensive information on books, including titles, authors, publishing dates, descriptions, and reviews, by utilizing the usage of the Google Books API. Users now have access to a large and regularly updated collection of books due to the Google Books API connection, allowing them to explore a variety of topics, categories, and authors. The main goal of the NSU Study Portal is to make it easier to find and get books. Users may easily browse the portal's huge library by using a user-friendly design and easy search features. The NSU Study Portal makes use of a database that has been diligently provided with full book details in order to guarantee the quality and dependability of the information about the books. The database contains vital information about books, like titles, authors, publishing dates, descriptions, and reviews, allowing users to choose the books they want to learn more about. Utilizing the Django web framework aided in the building of the NSU Study Portal. Django provides an effective and secure framework for creating complex web applications, assuring the stability, scalability, and performance of the site. In addition, the Django Rest Framework was used to provide a public API that enables seamless interaction between the front-end and back-end, providing access to book data for both the portal's users and the public as a whole.

The NSU Study Portal, in conclusion, is a dynamic web program that provides access to an extensive collection of data and books. The portal gives visitors access to comprehensive book information and a robust book search option by utilizing the capabilities of the Google Books API. The NSU Study Portal aspires to be a useful tool for students, researchers, and book lovers alike with its dedication to convenience, user experience, and large book collection.

Software Stack

In order to create a reliable and effective system, several technologies were used in the development of the NSU Study Portal. The development process took utilization of the following software stack:

- *Django:* The NSU Study Portal was constructed using Django, a high-level Python web platform. It offers essential features including user authentication, database modeling, and URL routing.

- *Django Rest Framework:* The Django Rest Framework was used to develop a public API to retrieve book information. It facilitates the creation of RESTful APIs and guarantees seamless front-to-back communication.

- *Google Books API:* To allow book search capability, the NSU Study Portal makes use of the Google Books API's functionality. With the help of this API, users have access to a vast collection of books and can do searches for book titles, authors, publishing dates, descriptions, and reviews.

- *Front End:* To develop a simple and user-friendly design, the NSU Study Portal's front-end development team combined HTML, CSS, and Bootstrap. These technologies make it possible to display book search results and make reading a better experience.

Challenges faced

A lot of challenges had to be overcome during the development of the NSU Study Portal. These difficulties included:

- *Integration of the Google Books API:* An in-depth examination of the API's functions and documentation was necessary for the system's integration of the Google Books API. The first challenge was implementing the API to retrieve accurate book information and carefully merge it into the interface.

- *Database Population:* It took a lot of work to create and populate the database with book information, including titles, authors, publishing dates, descriptions, and

reviews. It took close attention to detail to make sure the database was accurate and full.

- *Improving Search Functionality:* It was difficult to create a search tool that was efficient as well as could deliver reliable results rapidly. It took a lot of work to implement the algorithms and techniques needed to improve the search process, including managing misspellings and offering relevant suggestions.

- *User Interface Design:* Designing a user interface brought its own set of difficulties in creating one that was both user-friendly and visually beautiful. It required careful attention to detail to provide a seamless user experience, responsive design across multiple devices, and accessibility compliance.

Despite these difficulties, the development team maintained and overcame every hurdle, which led to the effective deployment of the NSU Study Portal.

Conclusion

Through its book search feature, the NSU Study Portal is a website that gives users access to a huge collection of books. Users may look for books by title, author, publication date, and other details by utilizing the Google Books API. To build a stable and effective platform, the system makes use of Django and the Django Rest Framework.

We had to overcome a number of obstacles during the project, including connecting the Google Books API, filling the database, improving search capability, and creating a simple user interface. These obstacles were overcome, nevertheless, through persistence and outstanding attention to detail.

GitHub Link - https://github.com/Monirul-Islam-Mahmud/API-STUDY-PORTAL-2.0