TRIBHUWAN UNIVERSITY

INSTITUTE OF ENGINEERING

PULCHOWK CAMPUS

DEPARTMENT OF ELECTRONICS AND COMPUTER ENGINEERING

A

Report

On

E-BOOK STORE SYSTEM

Submitted To :

Department of Electronics and Computer Engineering

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Pulchowk Campus

Submitted By:

Abhishek Paudel(070 BCT 502)

Abin Shakya(070 BCT 503)

Arun Kumar Agrawal(070 BCT 509)

Ashuta Bhattarai(070 BCT 510)

Pinky Sitikhu(070 BCT 524)

Shubham Agrawal(070 BCT 546)

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With warm regards,
Abhishek Paudel (070BCT502)
Abin Shakya (070BCT503)
Arun Kumar Agrawal (070BCT509)
Ashuta Bhattarai (070BCT510)
Pinky Sitikhu (070BCT524)
Shubham Agrawal (070BCT546)

ABSTRACT

Ecommerce has become an essential part of modern life. In todays world, ecommerce covers almost all the fields of trade and transaction.From groceries to electronics, everything today can be bought or sold online.

In an attempt to contribute to the global ecommerce market, we have come up with a software project to address the e-book requirements of people through our web app, E-Book Store System. It provides access to numerous books of different categories and genre.

The project is concerned with developing an E-Book Store System which consists a well-organized database of digital books. It aims at improving the efficiency of purchasing e-books and reduces the complexities involved in to it at maximum possible extent.

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1. INTRODUCTION

1.1. Background

E-book store system is well organized system of book-shopping which performs an efficient interaction between the buyer (i.e. user) and seller (i.e. publishers). The project is a web-based application that bridges between the book readers and the publishers. The user can view various books of different genres, give reviews and ratings, and purchase them through the online payment portals.

This web app contains a list of books along with their descriptions, categorized with respect to their genres which can be downloaded by the registered users for free or with some price value as per the publications choice. Further, the users are also provided with the liberty to search for their desired book in the database by mentioning the book name, author or publication. The users can read books online and give their reviews and ratings.

Mainly in context of Nepal, though there are huge number of online readers, e-book store system has not yet flourished and also has not been able to attract many users, whereas, in the international market, paper books are almost obsolete.

While trading of products using computer networks and online social sites has been common, many people prefer e-books to printed books due to their portability, availability, cheap price and easy accessibility.

1.2. Problem Statement

Nowadays, buying printed books is a tedious job to do, as most of them are not accessible locally and some of them are very expensive. Even if the books are readily available, it is still tedious to go buy a book from an actual book store.

As a solution, an e-book store system system provides an easier way to shop for the books online. This system is free from the issues of delivery and shipping and thus provides an efficient accessibility of e-books to all the reading enthusiasts.

1.3. Aims and Objectives

The aim of this project is to create a common platform for interaction between book readers and publishers.

The objective of this project are as follows:

1. To remove the traditional way of shopping books.
2. To promote ebook system in Nepal and work with local book publications.
3. To save the time, money and physical space required by printed books.
4. To include variety of popular books in our database library.
5. To make an interactive library by adding user reviews, comments and rating system.

2. SCOPE OF PROJECT

The work focuses on analyzing the e-book requirement of people and making them available on the website for purchase. The project is targeted for all the readers with a (reading) device such as a laptop, smartphone, kindle etc. The website requires its users to have access to the online paying portals such as e-sewa and i-pay or have an account on the banks that support online money transaction in Nepal.

3. LITERATURE REVIEW

3.1. Existing systems

This section describes the existing e-book store systems available in national as well as international market.

3.1.1. E-Pustakalaya

E-Pustakalaya is an education-focused digital library and e-book store containing full-text documents, books, images, videos, audio files, and interactive educational software that can be accessed through an intranet or on the Internet. OLE Nepal started the development of E-Pustakalaya in 2008 with the aim to improve children's reading skills and develop a reading culture in schools by giving them free and open access to age-appropriate reading materials and to enable students to do research projects and promote habit of independent inquiry. Since E-Pustakalaya went live in 2009, teachers as well as other adults have also benefited widely from various teaching resources, and educational materials in agriculture, health, environment, local technologies, and so on.

3.1.2. Amazon Kindle store

The Amazon Kindle Book store supports downloading of e-books directly to the Amazon Kindle. So, it is a must that one purchases the Amazon Kindle e-book reader.

Amazon's Kindle e-book and periodical store comes with the benefit of being available for almost any device, not just the Kindle e-reader. Amazon has mobile apps for iOS, Android, Mac, Windows, and more, and synchronizes the available books across all of them. The bookstore itself features close to a million books, magazines, and blogs, many of which are completely free. The Kindle store also offers a wealth of new releases and bestsellers.

3.1.3. Google e-books

Google offers Android phone and tablet apps, iOS apps, apps for Sony and Barnes and Noble's Nook e-readers, and web access to their rapidly growing catalog of literature. Best of all Google partners with local bookstores and libraries to make book purchasing and borrowing available in brick-and-mortar locations.

3.1.4. Project Gutenberg

Before the era of Kindle or Nook, there was and still is Project Gutenberg, offering stacks of royalty-free, DRM-free literature to read on almost any device, completely free. It is the go-to service for books and literature that are in the public domain. The service has over 36,000 completely free and DRM-free e-books that one can read on multiple devices and another 100,000 books available through the service's partners and affiliates.

3.1.5. Bares and Noble Nook Store

BN‘s online bookstore has been around for quite some time now, but it only started offering e-book version of commercially published books recently. The Nook Store sports over 2 million books, including new releases and best sellers, and also offers a host of apps for the Android-based Nook Color e-reader. Barnes and Noble has Nook apps for Mac, Windows, Android, iOS, Blackberry and tablets.

4. REQUIREMENT ANALYSIS AND SPECIFICATION

4.1. Functional Requirements

- The system should be able to collect all the popular e-books.
- The system should contain e-books of all possible categories and genre.
- The system should be updated regularly with the addition of all the recent books.
- The system should be able to promote the local Nepali books.
- The system should be able to handle the payment mechanism with full security.
- The system should be able to show all the transactions made by a particular user.
- The system should be able to collect and display reviews on a particular book.

4.2. Non-Functional Requirements

4.2.1. Reliability

It is required that the system should display the genuine price of a particular book as per the agreement with the concerned book dealer.

4.2.2. Performance

The system should show consistent performance. The books should be available for purchase at any time.

4.2.3. Usability

The processes within the system should work smoothly even under a heavy traffic.

4.2.4. Security

The contents of the server should be well secured. No alteration should occur in the accounts or user database.

4.2.5. Modifiability

New books come to the market every now and then. The users may also request for a particular book. In such a case, the system should be well prepared to bring modifications.

4.3. Feasibility Assessment

Over the last few decades, the e-commerce system has grown exponentially. Moreover, the choice of printed books has slowly shifted towards e-books. Despite such a popular demand of e-books in the international market, Nepal has not been able to contribute much in the development of e-book store system.

With the increasing trend of e-commerce in Nepal, a system like this would certainly help the profound readers of Nepal get legally connected to the e-books they desire.

5. METHODOLOGY

5.1. Project Timeline

Timeline for our project is as shown in Figure 5.1.

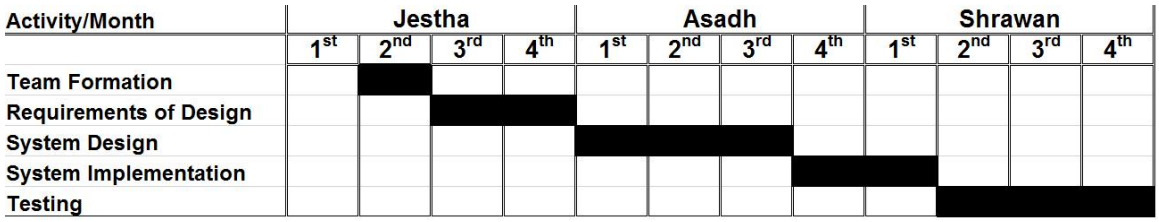

Figure 5.1: Gantt chart of project development

5.2. Tools used

The system was designed using Python as a back end language and Django as a web framework. Lots of tools support and its big community motivated us to choose it as our working language.

1. **Django Web Framework**
   Django is a high-level Python Web framework that encourages rapid development and clean, pragmatic design. Built by experienced developers, it takes care of much of the hassle of Web development, so one can focus on writing one‘s app without needing to reinvent the wheel. It is free and open source. Features of Django

   - **Ridiculously fast:** Django was designed to help developers take applications from concept to completion as quickly as possible.
   - **Reassuringly secure:** Django takes security seriously and helps developers avoid many common security mistakes.
   - **Exceedingly scalable:** Some of the busiest sites on the Web leverage Django‘s ability to quickly and flexibly scale.

2. **Bootstrap**

   Bootstrap is an increasingly popular front-end development framework which is feature rich and offers several benefits to those using it. Features of bootstrap

   - **Speed of development:** Rather than coding from scratch, Bootstrap enables you to utilize readymade blocks of code to help you get started. Combine that with cross-browser compatibility and CSS-Less functionality, many hours of coding can be saved.
   - **Responsiveness:** Creating mobile ready websites is a breeze with Bootstrap due to the fluid grid layout that dynamically adjusts to the proper screen resolution. There is virtually no work that needs to be done to achieve proper responsiveness.
   - **Consistency:** Bootstrap ensures consistency regardless of who is working on the project. In addition, results are uniform across platforms so output remains the same whether one is using Firefox, Chrome or Internet Explorer.
   - **Customizable:** Bootstrap can be tailor made according to the specifications of a project. Developers have the ability to pick and choose the features that are needed and the rest can be tossed.
   - **Support:** Bootstrap has a huge support community behind it so one can usually get help when s/he runs into issues. Furthermore, it is itself being continuously updated and the creators have been really good about putting out timely updates.

3. **SQLite Database**

   SQLite is an in-process library that implements a self-contained, server less, zero-configuration, transactional SQL database engine. The code for SQLite is in the public domain and is thus free for use for any purpose, commercial or private. SQLite is the most widely deployed database in the world with more applications than we can count, including several high-profile projects.

   SQLite is an embedded SQL database engine. Unlike most other SQL databases, SQLite does not have a separate server process. SQLite reads and writes directly to ordinary disk files. A complete SQL database with multiple tables, indices, triggers, and views, is contained in a single disk file.

   The database file format is cross-platform - one can freely copy a database between 32-bit and 64-bit systems or between big-endian and little-endian architectures. These features make SQLite a popular choice as an Application File Format.

   SQLite is a compact library. With all features enabled, the library size can be less than 500KiB, depending on the target platform and compiler optimization settings.

(64-bit code is larger. And some compiler optimizations such as aggressive function in lining and loop unrolling can cause the object code to be much larger.) If optional features are omitted, the size of the SQLite library can be reduced below 300KiB. SQLite can also be made to run in minimal stack space (4KiB) and very little heap (100KiB), making SQLite a popular database engine choice on memory constrained gadgets such as cellphones, PDAs, and MP3 players. There is a tradeoff between memory usage and speed. SQLite generally runs faster the more memory you give it. Nevertheless, performance is usually quite good even in low memory environments.

5.3. System Design

5.3.1. Dataflow Diagram

The dataflow diagram is shown in Figure 5.2.

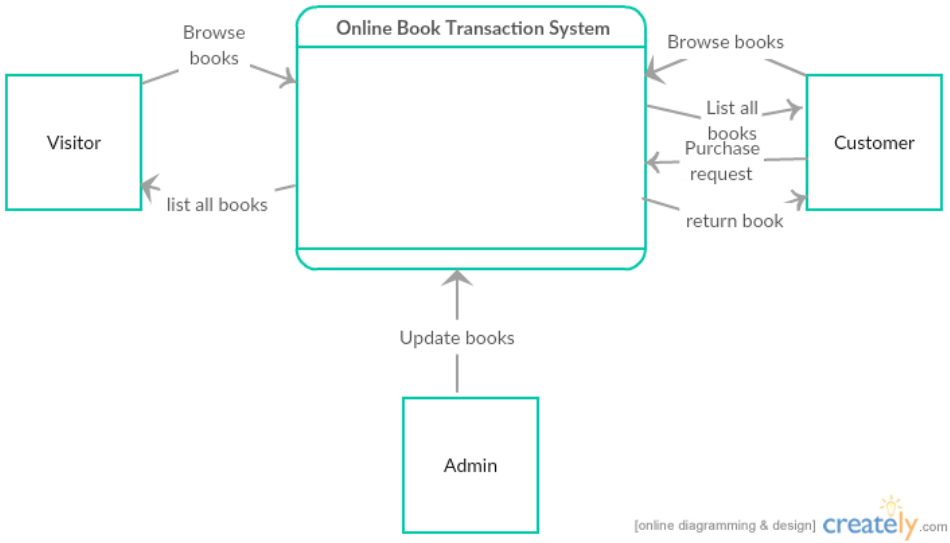

Figure 5.2: Dataflow diagram

5.3.2. Sequence Diagram

The sequence diagram for this project is shown below in Figure 5.3.

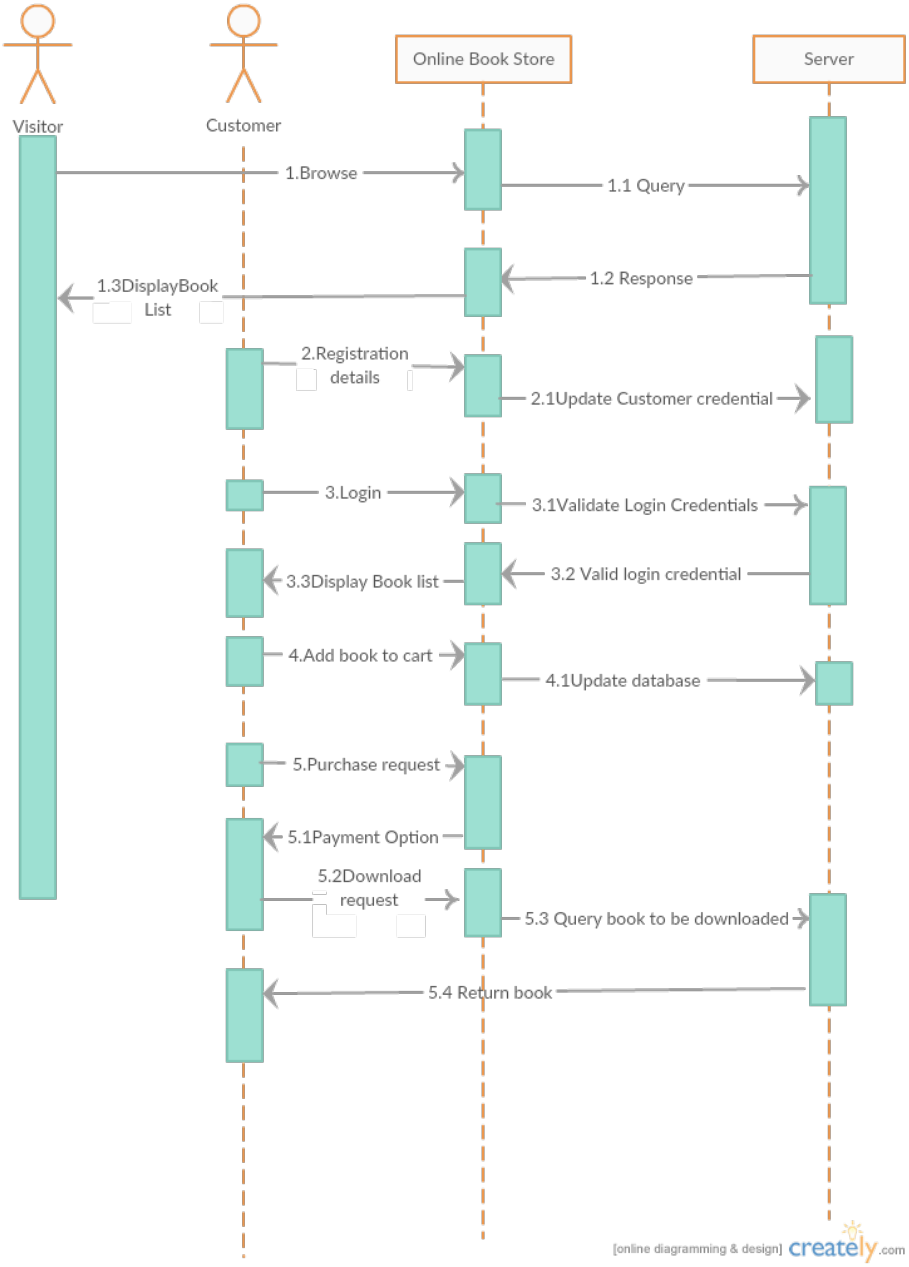

Figure 5.3: Sequence diagram

5.3.3. Use Case Modeling

A use case diagram shows the various actors that can act upon the system and what actionsvthey can perform.

The use case diagram for the system is depicted below in Figure 5.4.

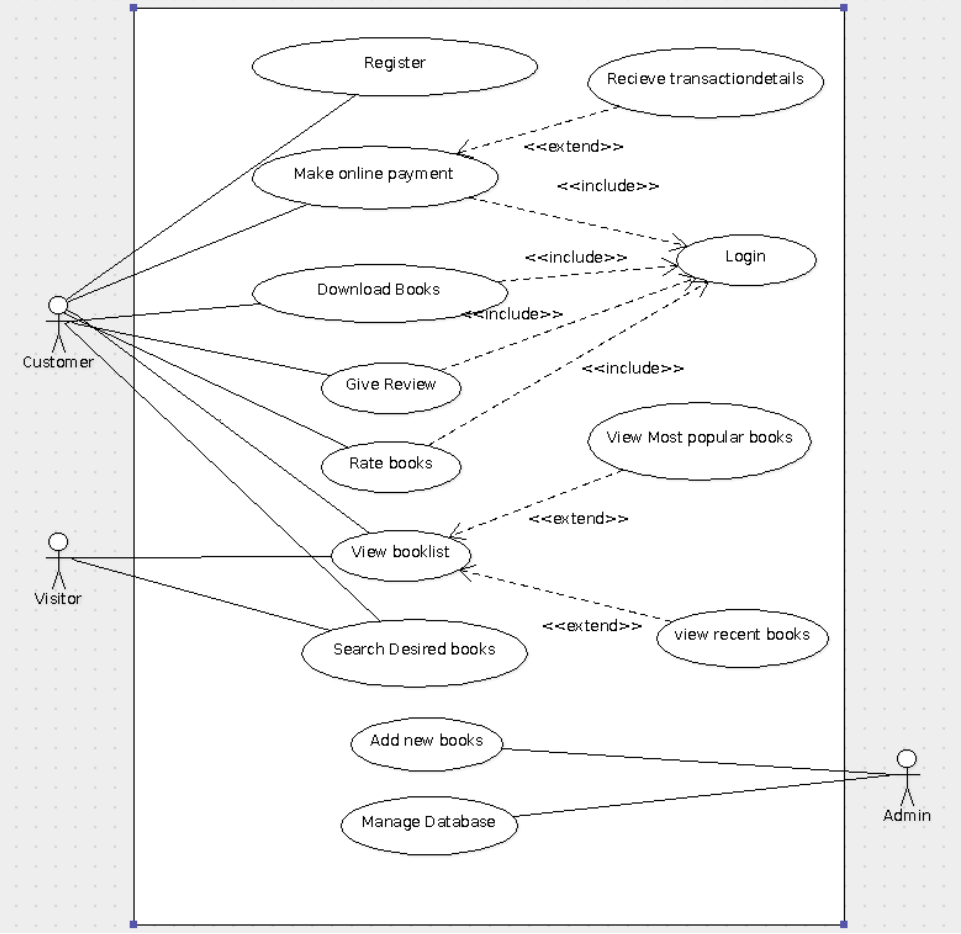

Figure 5.4: Top level usecase diagram

5.3.4. Activity Diagram

The activity diagram for the system is shown in Figure 5.5.

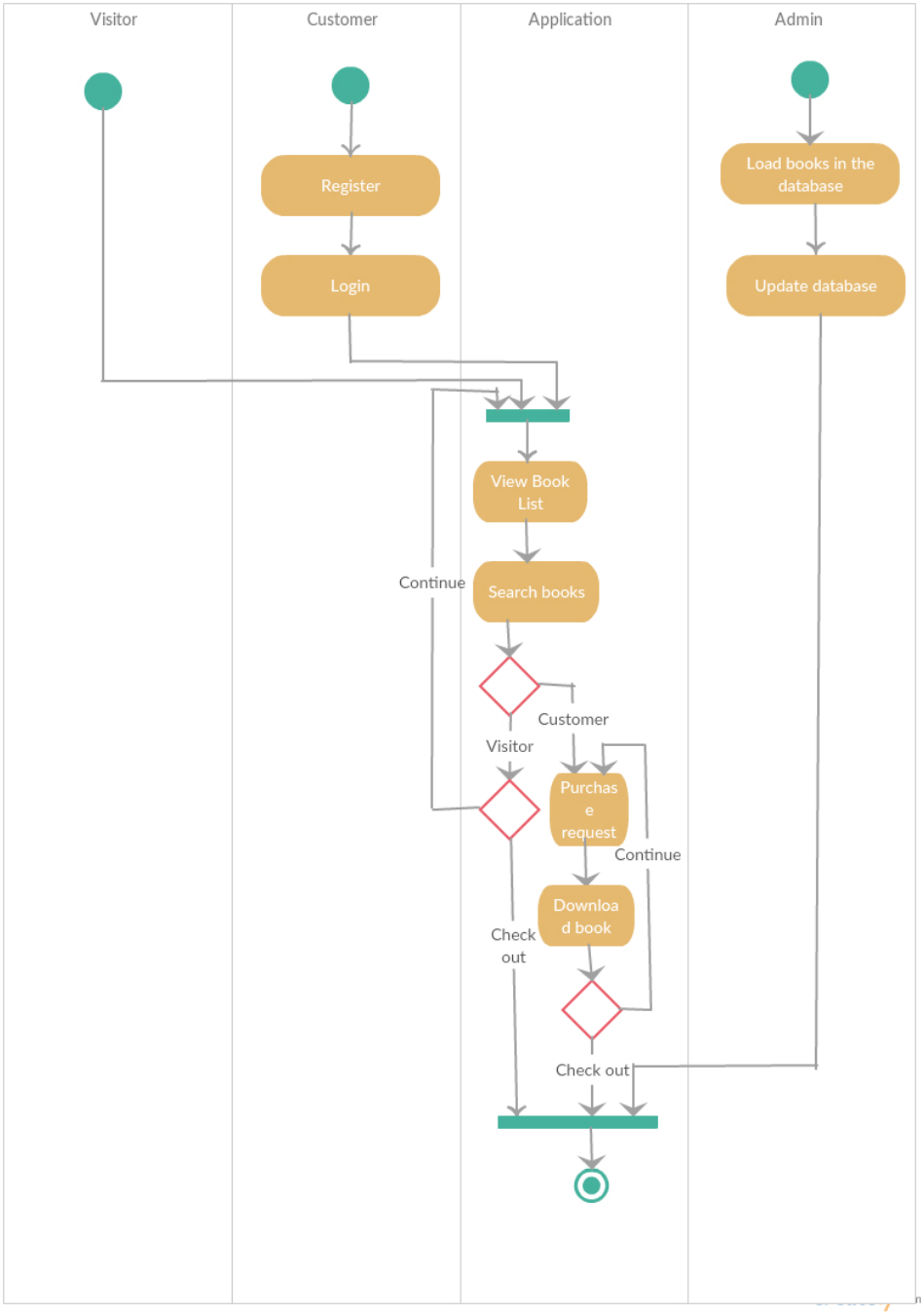

Figure 5.5: Activity diagram

6. CONCLUSION AND ENHANCEMENTS

6.1. Conclusion

In this project, an e-book store displaying numerous e-books of different categories and genre was developed. The books displayed in the website can be purchased, downloaded and read onlineas well. The project as a web application can be useful to fulfill the needs of a particular group or organization.

6.2. Limitations

- The system does not contain an AI implemented recommendation system.
- The system is not complete unless implemented in the real world.
- Users cannot sign up form social networking sites.

6.3. Further Enhancement

- A proper recommendation system shall be added with respect to the users‘ sentiments.
- Signup procedures using social networking sites shall be implemented.Effort shall be made to transfer the system from the development phase to the production phase.

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