

**Introduction to Software Engineering**

**Individual Assignment**

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Introduction

Northern Fame Bookstore (NFB) is a Malaysian local retail and distributor for all kinds of books that based at Bukit Jalil, Malaysia. The company only has 5 employees at the moment to manage the store. As the company keep grows, the company would like to have a proper system to allow them to have a better management with their business activity. The company proposed to develop an online system to increase their sales and improve their customer service. Currently the company using manual-record to stores their data into Excel spreadsheet and problem will occurs if the company did not handle well.

SYSTEM’s SCOPE AND OBJECTIVE

1. To allow staff to manage the store systematically.
2. To provide a system that can enhance and increase sales and customer satisfaction.
3. To enable customers to create and manage their account to view available books, make orders and payment, track orders, submit request and enquiry for books and services.
4. To allow staff to edit, view, add, update and remove item in inventory and generate report.
5. To provide backup for all activities as precaution steps in case of system break down.

Schedule Planning

Problem Definition

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| --- | --- | --- |
| Problem 1 | : | Does not have a proper back up system. |
| Cause | : | * The company do not have any proper back up system to back up their data. * Data are stored only on the company computer. |
| Effect | : | Data may have lost forever if unable to recover back the data. |
| Solution | : | Assign a proper back up system, using external storage and cloud storage. |
|  |  |  |
| Problem 2 | : | Unable to track, update and calculate transaction automatically |
| Cause | : | * All the transaction is recorded manually in excel spreadsheet. * Spreadsheet are saved in different files and location. |
| Effect | : | It may take some time to look for specific transaction information which may cause business activity slow down and inefficiency. |
| Solution | : | A database will be developed into the system to store transaction information and update daily. |
|  |  |  |
| Problem 3 | : | Customers that didn’t pay the outstanding payment can make another transaction. |
| Cause | : | Transaction information doesn’t store and update properly. |
| Effect | : | The company may loss a big amount of money due to a lots of debtors. |
| Solution | : | Database used to store transaction information will be developed, all transaction history will store in real time. |
|  |  |  |

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| --- | --- | --- |
| Problem 4 | : | Customer’s information cannot be easily accessed. |
| Cause | : | The number of customer increased time to time. |
| Effect | : | * Data redundancy may occur. * Some data might be lost. |
| Solution | : | User can register themselves on the online system and the information will be stored in database. |
|  |  |  |
| Problem 5 | : | Data duplication may occur, multiple customer with same name. |
| Cause | : | * Amount of customers keep increasing * Several customers with same name. |
| Effect | : | Unable to validate customer who made specific transaction. |
| Solution | : | Assign special ID to each customer. |

Requirement Analysis

Functional requirements

1. The system should be allowing the user to log into the system.
2. The system should be able to generate reports.
3. User should be allowed to made a purchase on any books unless the book is out of stock.
4. The system should be able to know how many books left in inventory to allow user to add new stock.
5. The system should not allow user to login multiple account in single time.
6. The system should not allow user to purchase book that currently out of stock.
7. User should be able to change their profile information.
8. The system should not be able to duplicate the same data.
9. System should allow the user to add quantity of specific books.
10. User should be able to made payment by using credit cards.

Non-functional requirements

* Hardware requirements: Minimum requirements, running on any 32bit or 64bit processor with at least 1GHz, 2GB of RAM memory and 2GB of storage. Maximum requirements, running on any 32bit or 64bit processor with at least 2GHz, 4GB of RAM and 4GB of storage.
* Software requirements: Running on any Windows 7 and above operating system.
* Security requirements:
* Availability requirements:
* Interface requirements:

Logical Design

Context Diagram – NFB e-Bookstore

C:\Users\Human\Downloads\ISWE - Context Diagram.png

Dataflow Diagram – NFB e-Bookstore

TESTING

IMPLEMENTATION

In order to enjoy the full experience of the system, please check the system and browser requirement as shown at below:

System Requirement

|  |  |
| --- | --- |
| MINIMUM |  |
| Computer and Processor | 32-bit or 64-bit processor with at least 1GHz |
| Memory | 2GB of RAM |
| Hard disk | 1GB available disk space |
| Operating System | Windows 7 or higher. |
|  |  |
| MAXIMUM |  |
| Computer and Processor | 32-bit or 64-bit processor with 2GHz and above |
| Memory | 4GB of RAM |
| Hard disk | 4GB available disk space |
| Operating System | Windows 10 |

Browser Requirement

The system support most of web and mobile browser, most of the content in the system is written in HTML and CSS which most browser support. To experience smooth performance of the system please kindly upgrade following browser to the latest version:

* Google Chrome
* Mozilla Firefox
* Apple Safari
* Microsoft Edge

Conclusion