



Sri Lanka Institute of Information Technology

Information Technology Project (IT2080)

Textile Shop Management System

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Project Proposal

Submitted by:

| | |
|------------|--------------------------------|
| IT21039140 | S.V. Dewasurendra |
| IT21105616 | H.G. Sachin Lakshan |
| IT21065330 | K.L.P. Chamikara |
| IT21002892 | Gamage I.S. |
| IT21039218 | M. Imedha sewwandi Kawshalya |
| IT21071034 | Thewuni Thesanya Wanniarachchi |

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Introduction

Company Background

Jayananda Fashion is a fashion clothing shop situated in Dikwella town. It's owned by Mr. P. Jayananda. The fashion shop management system is designed to improve the functionality of the company "Jayananda fashion" which is involved in selling fashion goods. This system helps to maximize efficiency and improve the management of employees, orders, suppliers, finance, etc.

Problems and Motivation

1. **Problem – Time consuming**

All the Managers and employee must maintain documents manually for every task that done by them. When creating documents, it takes lot of time to gather all the data for those documents. Because humans don't work at one solid rate through the whole day. On other hand managers can't keep track on stocks in real time so they can manage stocks properly.

Motivation

From the database of our web application, Managers can search data they want very fast and accurately. Automation software is much faster. It works at a consistently high rate and doesn't stop unless you tell it to. So, it's very fast when employees enter data into the system. And we provide export functions for almost all main functions, from that manager can generate reports from the data whenever they want at an instinct.

2. **Problem – Data redundancy**

When everything is done within a manually centered environment, data duplication is a common problem. As the use of stationery increases over time, space should be also increased. Then it is difficult to maintain many documents within a limited space. As well as there is higher time consumption when storing data. Sometimes there were data misplacing and redundant also.

Motivation

Solution for time-consuming and data redundancy and storage problems we are making the database which can keep all the details of the crops and products. When we use the database, we can search any data using the database very quickly. Maintain database to store data and keep up to date.

3. Problem – Data Security

In a manual system unauthorized access is possible as documents and other details are open for everyone. If you aren't communicating using encrypted exchanges and secured channels, your data could become vulnerable especially if it's all happening in the background. It is a huge problem when it comes to confidential documents such as transaction details, secret formulations of products and bank details

Motivation

As physical documents can be looked up by unauthorized people is big issue for the system, we are planning to make fully automated system with high security. In here only the authorized people can access the confidential documents. Therefore, we can protect confidential information from unauthorized people

Aim and objectives

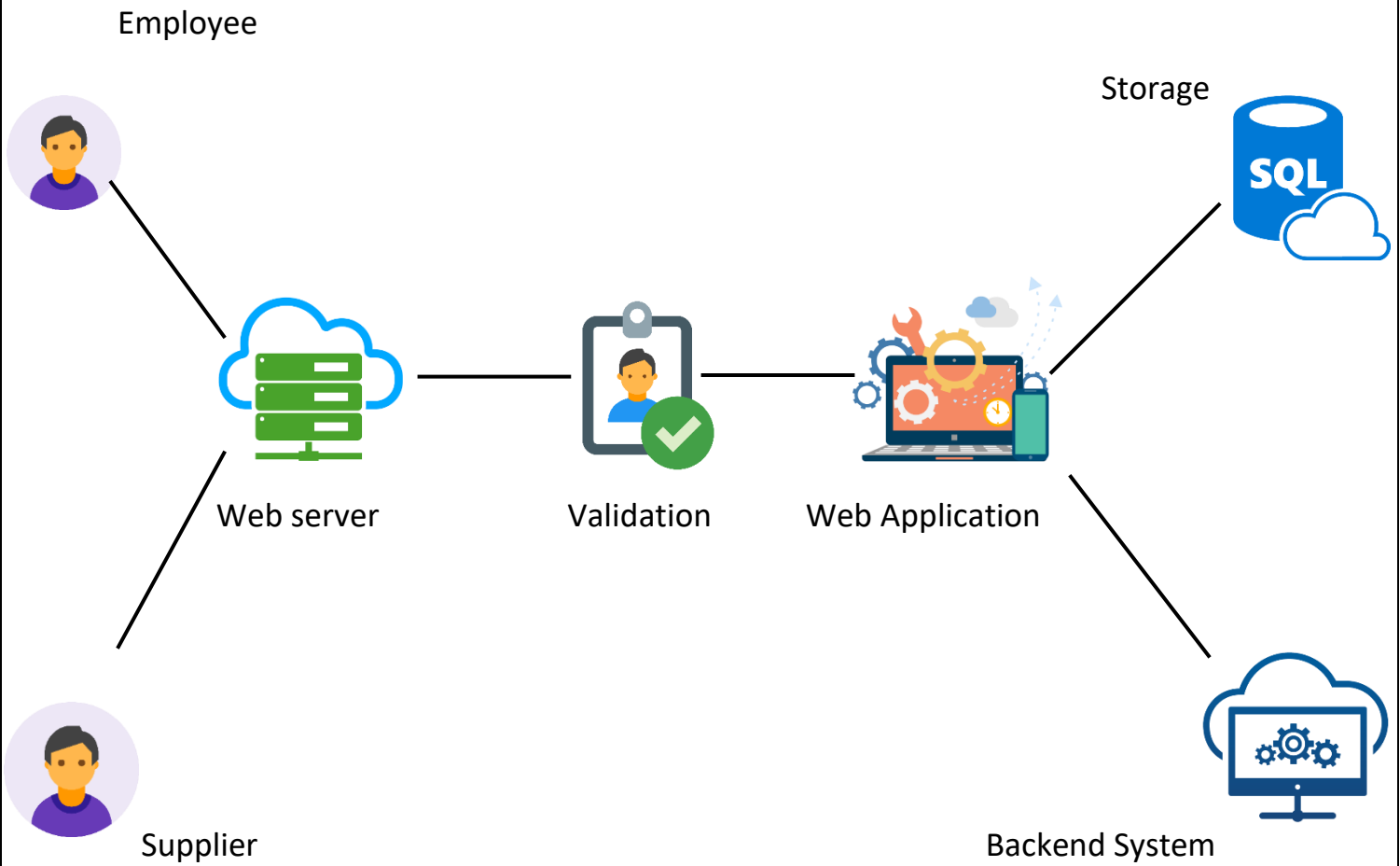
Aim

The aim is getting the maximum by a minimum effort. So, we plan to improve the profit of the business by making the business processes quicker and easier than the current human controlled environment while reducing the resources as much as possible including time and labor.

Objectives

Most effective ways to optimize efficiency at the shop is to modernize the processes and systematize the workflows. Managers need to minimize the time consuming and labor-intensive tasks, reduce using manual file systems and make the management processes easier in a computerized environment. Also, this will simplify the processes of supply chains.

System Overview



Literature overview

Paper based records

Keeping all necessary records of transactions, employees, suppliers, preparation methods of products in physical files is called as paper-based records. This is one of the basic methods that can be used as a solution. Physical files containing important details are at high risk of being damaged and misplaced. It is difficult filter out data needed in an urgent situation.

| Pros | Cons |
|-------------------------------|--|
| Cheaper | High risk to be damaged |
| Easy to record | High risk to be misplaced |
| No technical knowledge needed | Low security. Everyone can access |
| | Difficult to filter out important data |
| | Problems associated with storing |

Microsoft office

Microsoft office is an extremely versatile option when it comes to documenting. We can use Microsoft office for saving and printing reports and Microsoft excel for storing and keeping records.

| Pros | Cons |
|---|--|
| Data can be stored in a well-organized manner | Not suitable in collaborative working |
| Easy to record | Less reliability |
| Not much technical knowledge needed | Low security. Everyone can access |
| Available at any time | Time consuming for entering and filtering out data |

System Functions

Finance Management

this function keeps a record of all the financial activities of the company in order to calculate the monthly incomes and expenses throughout the year to get the final profit of the company. the main task of the function is to keep record of all the financial details of the company in a orderly manner

- calculate the monthly salaries of every employee by adding bonuses, deductions and if there is a OT amount, the OT amount is added to the salary
- it will keep records of cost like cost of utility bill and total cost of product that was purchased by the company
- Furthermore, this system will keep records of the total income of the month.
- this function can generate reports for employees' salaries ,and report of total income ,total cost and monthly profit.
- This function allows the system admin to delete record update records and insert records

This function is developed to simplify the process finance management to make it easy and efficient for the owners and managers to handle the finances

Non-Functional Requirements

- Usability
- Availability
- Manageability
- Security

Technical requirements

- Access Control
- Authentication
- Data Quality

Order Management

In this order management function, user has the ability to make the orders through this online environment. So, it will make this business processes to be done in quicker and more efficient manner.

Functions

- After receiving the stock update by the stock management section, user can make orders to the requested items from the suppliers prioritized in the supplier management section. After

entering the required details and send order button, supplier will receive an email with the order details. Then, supplier can accept it and send a order confirmation mail and, then order section inform the stock management section.

- It also gives the facility to cancel an order within a specific time by mentioning the reason and system will notify it to the supplier via an email.
- When ordering an item which has ordered earlier, user does not need to enter all details again and he can make a re-order to that item by just changing only the details he wants.
- When an item is rejected and returning, user can inform it to the supplier with the details of the returning item through the system and it will send a mail to the supplier.
- This system also has the facility to generate an order summary report for a given time, which will include the full details of the ordered items and returned items in that given period.

Non-functional requirements

- Availability
- Manageability
- Compatibility

Technical requirements

- Maintainability
- Authentication
- Authorization

Employee Management

This function manages all the employee details. First, the admin collects all the employee details and registers employees to the system. Employees cannot register the system by themselves. After creating an account admin provides usernames and passwords for the employees. After finishing this process employees can log into the system by entering their login credentials. Once employees log into the system employee can view their profile details. The system allows users to update their passwords.

Functions

system Admin functionalities

- Register and create user accounts for Employees
- View employee leave details – after requesting leave by the employee. admin can check their reason and decide to approve it or not.
- View all employee details – admin can view all employees' details and it can be edit, update, or delete details from the database

Employee functionalities

- View their profile – using the employee id and password employee can view their user profile
- Change password – employee can change their password
- Apply leave – when required to request leave, employee should fill the leave form and submit

Non-Functional Requirements

- Usability
- Availability
- Manageability
- Security

Technical requirements

- Access Control
- Authentication
- Data Quality

Item and Stock Management

Item and Stock management is an important role in Jayananda Fashion Shop Management system. From stock management, it allows admin to continuously keep track of stocks accurately in real time. If selling something, then stock details must be updated automatically, and if return goods to supplier for any reason, then it must be update by user. This part of the system is accessible by the admin therefore access control is implemented for this function to perform the necessary functions by the admin only. But user can search by entering item name or code for view their searched item is available or not. In Item management also insert new items to the system and generate item code.

Functions

- Insert new item - This function includes insert new item to the system. And generate item code for each item.
- Generate Reports - The system also facilitates generate report of item summary
- Manage Stock - This function includes inserting stock details into the system and manage it. If selling something, then stock details must be updated automatically, and if return goods to supplier for any reason, then it must be update by user.
- Search stock details - The user can search stock details of each item, from using item name or code.
- Generate Reports – At the end of the week the system generates the report.

Non-functional requirements

- Availability
- Scalability

- Security

Technical requirements

- Maintainability
- Authentication
- Authorization

Sales Management

Sales management is one of the most important sectors of system. Sales management system is designed to manage all production sales and it allows all the sales related tasks at any time. In addition, sales management is handling calendar schedule for events, meetings, and promotions. These promotions will be changed from month to month. If we have damaged items, we should to inform about stock management side.

Functions

- Organize various events, meetings and promotions – Manager is planning all meetings events except holidays and weekend days. In addition, manager changes sales promotions from month to month
- Update and reminder details – When event or meeting comes tomorrow system display notification in today for remind details
- Rescheduling and canceling events – If an event cancelled manager will be rescheduled and inform it to all members
- Manage sales tasks – In here system allows the sales admin to add, update and delete sales items
- Generate a sales report – System allows the sales manager to generate sales report according to all details about sales and post sales

Non-functional requirements

- Reliability
- Manageability
- Usability

Technical requirements

- Authentication and Authorization
- Productivity

Supplier Management

Supplier management system is a structured program to manage our suppliers and improve their impact on buyer's business. Through our supplier management system, we can manage our suppliers by storing their personal information, updating, add new suppliers and deleting suppliers and also, we can search supplier details.

Functions

- Manage suppliers – Through this function we can manage suppliers. Suppliers can join our organization by registration option. And already registered suppliers can log into the system under manager's permission. Also supplier manager can delete the suppliers from the company.
- Generating reports – This function is used to identifying the best suppliers that can provide good service at low cost and low distance from their destination and preparing a report based on that information.
- Location management – This function is used to set a map for each suppliers share their location. So that we can easily select a supplier for given order without wasting time.

Non-functional requirements

- Availability
- Reliability
- Manageability

Technical requirements

- Privacy
- Internal controls

Technologies

Django

Django is the high-level open-source web framework that uses python as the programming language this web framework allow quick development of very secure and maintainable websites. this web framework was built by experienced developers so it very easy to work with and learn, Django takes care of many of the difficulties of web development so you can develop your web application with ease. it has an active and thriving community, great documentation, and many options for free and paid support [1]

Django helps you to develop a software that is [1]

- Complete
- Versatile
- Secure

- Scalable
- Maintainable
- Portable

Python

Python is a very famous programming language that is used for developing websites, software, automate tasks and conduct data analysis. It can be used to create a variety of different programs and is not specialized for any problem [2]

It is beginner friendly, because of that it became one of the most used programming languages. [2]

Advantages of python development is [3]

- Easy to understand, learn, and write
- Improved productivity
- Interpreted language
- Dynamically typed
- Free and open source
- Vast libraries support
- Portability

MySQL

MySQL is a relational database management system (RDBMS) developed by Oracle that is based on structured query language. mysql is integral to many of the most popular software stacks. it is open source it has a rich feature set and ongoing development and support from oracle because of that lot of internet critical organizations are using mysql [3]

Advantages of MySQL are [5]

- Data security
- Scalability
- High performance
- 24*7 usability
- Comprehensive transactional support
- Complete workflow control
- Low cost
- Flexibility

GitHub

GitHub is a Git repository hosting service for software development and version control using Git. This offers the distributed version control and source code management functionality of Git and some additional features.

Gantt chart



Work Distribution

| Registration Name | Task |
|--|---|
| IT21039140 S.V. Dewasurendra | Finance Management <ul style="list-style-type: none"> • Manage salary amount • Manage payment details • Manage leaves of each employee |
| IT21105616 H.G.Sachin Lakshan | Order Management <ul style="list-style-type: none"> • Store the order details • Cancel order • Update order • Search order details • Generate report of orders |
| IT21065330 K.L.P.Chamikara | Employee Management <ul style="list-style-type: none"> • Create user account • View, Update, delete account details • Apply leave • Generate employee details report |
| IT21002892 Gamage I.S | Item and Stock Management <ul style="list-style-type: none"> • Generate item code • Generate report of items • Automatically update stock details |
| IT21039218 M.Imedha Sewwandi Kawshalya | Sale Management <ul style="list-style-type: none"> • Generate a report • Create a calendar schedule |
| IT21071034 Thewuni Thesanya Wanniarachchi | Supplier Management <ul style="list-style-type: none"> • Manage suppliers • Generate reports • Location management |

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