Sri Lanka Institute of Information Technology

Floral Management System
Project Proposal
Information Technology Project (IT2080)
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Group 4

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(Supervisor's signature)

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1. Introduction

1.1 Company Background

Daniya Flora is one of the finest providers of decorations mainly floral arrangements at reasonable and competitive prices for simply any type of event (weddings, birthday parties, functions, conferences etc.). Daniya Flora was founded by Mr. Danstan Perera in 2010.From here on Daniya Flora has revolutionized Sri Lanka's floral industry with its professional services and carefully developed high-quality assured procedures of producing the best floral arrangements

1.2 Problems Faced by the Client

- The growth of this business in the recent past demands more and more records of data to be stored and managed. So a significant amount of time is wasted in retrieving data making it impossible to respond to customers' requests very quickly.

- Currently the business is facing challenges with the outdated manual method of processing transactions and managing records (i.e. customer, employee, sales, orders) since the records are currently being written down in books. This method is very slow, inaccurate and causes many human errors.

- It's a very hectic task to check for available dates when booking an event since the events are written down in diaries and searching for the events consumes time.

- Payroll calculation takes into account many data such as the leaves of employees, bonuses and deductions so HR Managers find it cumbersome to gather all the data when calculating the salary of each and every employee.

- Stock Manager is not notified when the stock level decreases so the purchase order is sent to the supplier only when the inventory is already out of stock. This means that the business cannot deliver products or plan any event till the stock is received from the supplier.

- Another problem that the business is facing is that it can not see its current financial position or compare its income to that of previous months so the business cannot analyze whether it has increased its overall profit or not.

1.3 Solution

A desktop application with enhanced capabilities and functions can be used to solve all these issues. This would be a useful application for all the users i.e. employees of the business since it can be used offline and will provide users with faster responses and a rich user experience. This system has functions like HRM, supplier management, stock management, package management, event management, orders and delivery management and CRM which together will add value to Daniya Flora by increasing its business opportunities, improving its profit and helping with the organization goals.

2. Benefits of the System

- **No data redundancy**

  A central database is used to store the large volumes of data minimizing redundancy and other anomalies. This enables the business processes to respond faster and more accurately.

- **Fast retrieval of data**

  Automates all the manual processes currently followed by the business. This makes the business processes easier and faster by giving the users of the system all the resources they need at hand, eliminating human errors and thus allowing the fast retrieval of data records.

- **Guarantees improved business decisions**

  Generates detailed reports, either weekly or monthly, so that the administrators can analyze the data, monitor the performance and take business-related decisions to improve their sales and profits.

- **Special Event calendar**

  An event calendar is maintained to check for available dates when booking events.

- **Positive working environment**

  Provides a fair and equal working environment for all employees and thus improves employees' relationships with the business.

- **Improves customer and supplier relationships**

  Improves customer and supplier relationships by using supplier management and customer management functions to manage their details.

- **Payroll calculation**

  Payroll calculation function is implemented to do payroll calculations with minimum effort. This has integrated access to other information such as leaves, deductions and bonuses.

- **Instant notifications**

  Sends warning notifications to Stock Manager when stock level reduces so that stock can be re-ordered before it runs out.

- **Data integration**

All the processes are integrated and thus increases the overall efficiency of the business.
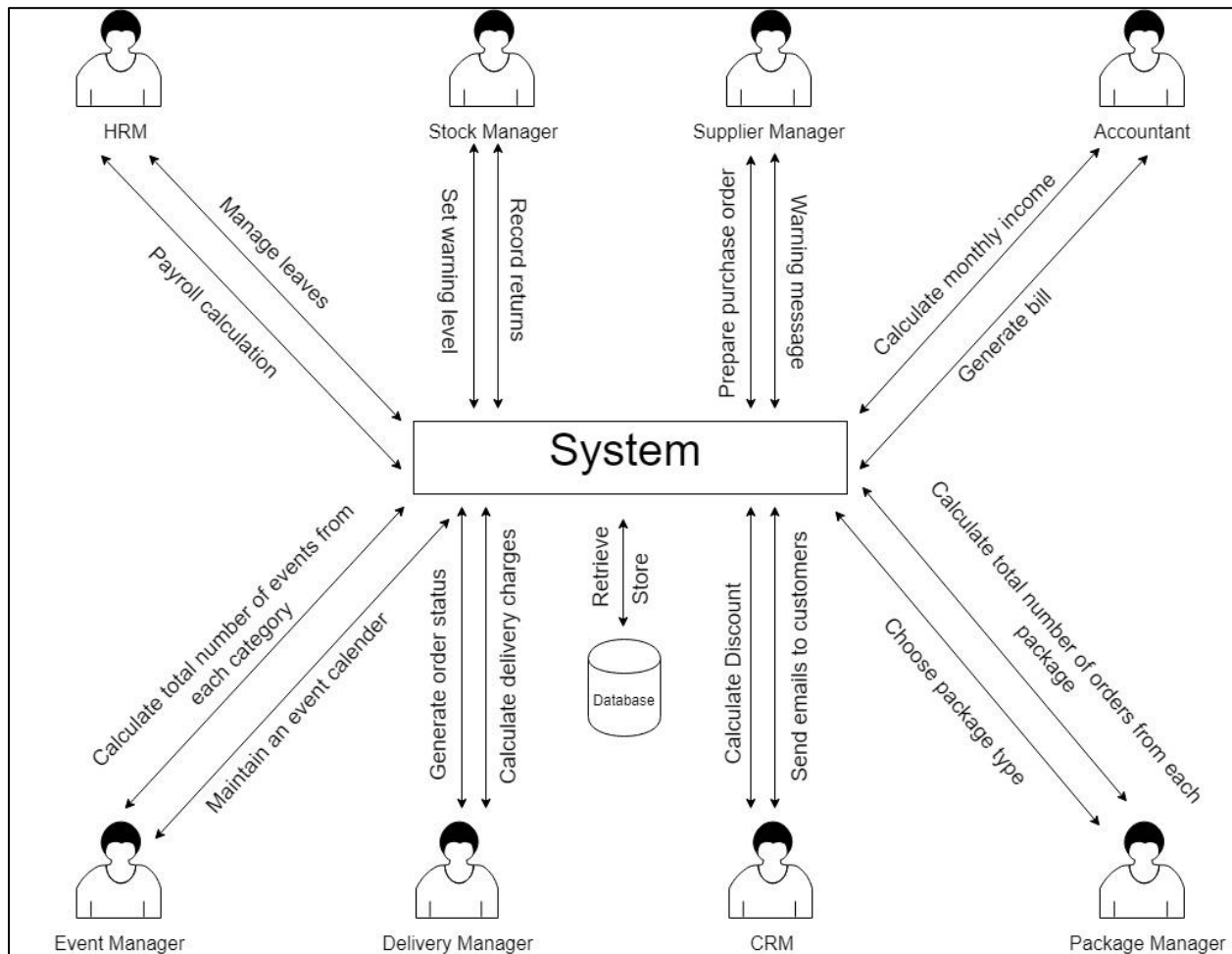
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3. System Overview Diagram

Figure 1: System overview Diagram

*All the employees can login to the system and perform insert, update, delete and search operations.

4. System Functions

4.1 Human Resource Management

Using this function, the HR Manager can manage the details of all employees of the business i.e. they can insert, update, delete and search for employee details. This function also includes the option to manage the leaves of employees. Here, the employees leave type, such as medical leave, casual leave, no-pay leave, and the number of days of leave can be selected and the HR Manager has the capability to approve/reject the leaves. Another part of this function is to do the payroll calculation of each and every employee. The leaves will be taken into consideration when calculating the salary. Monthly /weekly reports can also be generated based on the manager's requirements. Altogether this increase employee engagement and ultimately impact retention.

4.2 Stock Management

In stock management, the Stock Manager is able to insert, update, delete and search for any stock item record. Also, the manager can record the returns of any stock item which is returned by the customer due to any damages or faults in the item. Another importance of this function is that when the stock level gets low, it automatically sends a message to the Supplier Manager. The Stock Manager can also calculate the average usage of each type of stock and generate weekly, monthly stock reports.

4.3 Sales and Payments Management

In sales and payment management, the accountant will able to insert, update, delete and search any sales or payment record. After the customer confirms his/her package or order details, the accountant is able to calculate and display the bill with the total amount that have to pay. This amount will be calculated by taken into account any discounts that the business offers. The accountant also has the option to print the bill. Reports can also be generated regarding the monthly income / profit of the business.

4.4 Event Management

Using this function, the Event Manager can insert, update, delete and search for events (weddings, birthday parties, conferences etc.). An event calendar is maintained which makes it

more convenient and easier for the Event Manager to find the available dates as well as the booked dates.

This eliminated the time spent in searching for free dates. Event Managers also have the opportunity to calculate the total number of events from each category. Based on this information, monthly/weekly reports can be generated to suit the event Manager's requirements.

4.5 Orders and Delivery Management

In orders and delivery management, the Delivery Manager is able to insert, update and delete orders. If the user needs to get any information about a particular order, then we use the search option. Another sub-function is that users can check the order status to see whether a particular order has been successfully delivered or not. The delivery charges for a particular order depends on the distance from the floral shop to the customer's destination. A map will be displayed which shows the route to the destination. Monthly reports can be generated according to the Delivery Manager's requirements.

4.6 Supplier Management

In supplier management, the Supplier Manager has privileges to insert, update and delete suppliers. Also, the Supplier Manager can search for a particular supplier using the search function. The Supplier Manager can create a purchase order very easily using this system and send the purchase order to the specific supplier via an email. The Supplier Manager can also generate monthly reports about suppliers regarding their average supplies purchased by the business.

4.7 Package Management

Daniya Flora is a floral arrangement provider for any type of event so they have different types of packages for each event based on price and items included. This gives the customers the flexibility of choosing the desired package from a variety of different packages. The package management function gives the Package Manager the chance to add new packages, update existing packages or remove packages. There's an option to search for packages as well. The total number of orders made from each package can also be calculated and monthly reports can be generated based on this information which ultimately improve the business's decision making.

4.8 Customer Relationship Management (CRM)

The CRM function helps to manage the details of all the customers. The CR Manager can add, update and delete details of customers. The customers are categorized into customer types, such as Platinum, Gold, Silver and Bronze, and specials discounts will be offered to specific customer types. Using this function, emails can also be sent to the customers regarding the offered discounts. This function also has the capability of generating monthly/weekly reports to suit the CR Manager's needs. Overall, this function improves the business relationship with customers and focuses on customer retention.

5. Tools and Technologies

Programming Languages

- Java

- MySQL

Tools

- IntelliJ IDE as the development environment

- MySQL Workbench as the database designing tool

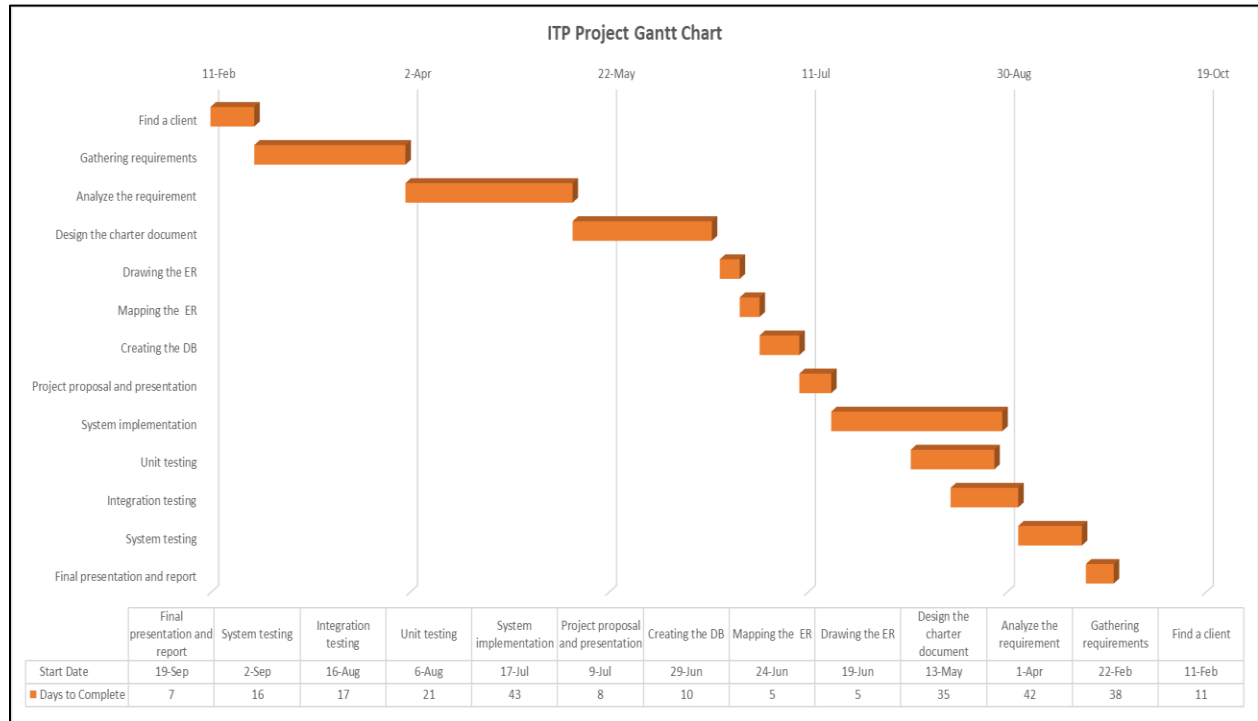- Scene Builder for designing the JavaFX UIs

6. Gantt Chart

Figure 2: Gantt Chart

Table 1: Gantt Chart

Task	Start Date	Days to Complete
Find a client	11-Feb	11
Gathering requirements	22-Feb	38
Analyze the requirement	1-Apr	42
Design the charter document	13-May	35
Drawing the ER	19-Jun	5
Mapping the ER	24-Jun	5
Creating the DB	29-Jun	10
Project proposal and presentation	9-Jul	8
System implementation	17-Jul	43
Unit testing	6-Aug	21
Integration testing	16-Aug	17
System testing	2-Sep	16
Final presentation and report	19-Sep	7

7. Task Distribution

Table 2: Task Distribution

	Name with Initials	**Brief Description of the Function**
1.	Tennakoon S. D.	**Human Resource Management (HRM)** • Insert, update & delete employees • Search employees • Calculate employee salary • Manage leaves • Generate weekly/monthly reports
2.	Weerakotuwa P.R.W.M.R.Y.	**Inventory Management** • Insert, update & delete stock • Search stock • Record returns • Set warning level considering the total stock remaining • Calculate average usage of each stock • Generate weekly/monthly reports
3.	Kumari R.M.M.P.	**Manage Sales and Payments** • Insert, update & delete sales/payments • Search sales & payments • Calculate total bill • Calculate monthly income/profit • Print and display bill • Generate weekly/monthly sales reports
4.	Perera L.A.D.Y.S.	**Event Management** • Insert, update & delete events • Search events • Calculate the total number of events from each event category • Manage an event calendar • Generate weekly/monthly reports

5.	Bandara H.M.S.S.	**Manage Orders & Delivery** • Insert, update & delete orders • Search orders • Check order status • Calculate delivery charges • Generate weekly/monthly reports
6.	Wijerathne S.M.B.E.	**Supplier Management** • Insert, update & delete supplier details • Search suppliers • Prepare purchase orders and email to supplier • Calculate average supplies from each supplier • Generate weekly/monthly reports
7.	Mudalige J.M.A.I.	**Manage Packages** • Insert, update & delete packages • Search packages • Choose package type • Calculate total number of orders made from each package • Generate weekly/monthly reports
8.	Subasinghe M.P.M.R.	**Customer Relationship Management (CRM)** • Insert, update & delete customers • Search customers • Send emails to customers • Calculate discounts according to the customer type • Generate weekly/monthly reports

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