158225 Assignment 1

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1）Project Description

A chain of garden centers has an old system that manages stock and sales. They have recently purchased a landscape design business which uses an off the shelf garden design application. hey would like to build a new application that is up to date and that combines and integrates the functions of both of these other systems. The new system should allow the garden centre to track its sales, deliveries, stock levels and purchase orders, provide tools to help garden designers to do their designs and to order the stock necessary for the newly designed gardens to be Constructed.

2）Organizational Details

The chain consists of 10 garden centers across the North Island of New Zealand. All of these garden centers contain only sales and management staff, and there are no IT staff. The landscape design business employs 30 people and provides services across New Zealand. They have two technical staff who perform basic computer maintenance as well as managing other technical aspects of the landscaping equipment (e.g. electronic measuring devices).

3）Resources Available

The off the shelf garden design application has excellent user documentation, but the vendor will not provide access to any technical documentation. Several staff are expert users. The stock and sales system is poorly documented, and in some cases the staff have by-passed the inefficient system with spreadsheets and paper forms.

A . A description and explanation of all assumptions I have made in my project planning.

1 . This is a System that manages stock, sales, and allows garden centers to track their sales, deliveries, inventory levels, and purchase orders, providing tools to help garden designers complete their designs, and ordering stock needed to build newly designed gardens.

2 . Users of the new landscape architecture application should be targeted at garden managers, garden designers, and visitors. Users with different identities log in with different login charts, which record the account number, password, identity and other information of the login.

3 . For managers, should be able to make them by selling the shares of the garden, the program to monitor the inventory of the garden, you can contact through the system stores restock, garden designer distribution tasks, and for goods, the RFID label on garden goods and receiving tourists purchase orders, and track the delivery status.

4 . For the garden designer, the system should be able to see where the garden has received appointments, suggestions or complaints, design the tour roadmap of the garden for tourists, make maintenance and improvement targeted, and apply for inventory items such as tools and materials through the system.

5 . For visitors, they should be able to see the road map of the garden through the system, identify objects in the garden, purchase products in the garden, buy shares, and make

suggestions or complaints on the whole or details of the garden.

6 . The 30 staff of landscape design are responsible for all 10 gardens.

7 . 2 technicians are responsible for monitoring the normal operation of the system.

8. Because there is no IT staff, when the system goes wrong, they need to find the staff who sells the system to them.

9 . Sales personnel record and track the actual sales situation in handwritten forms instead of operating through the data generated by the system.

10 . The tools in the garden inventory require the garden manager to contact outside merchants to buy them, and the products sold are produced by the garden itself.

11 . At a minimum, the program should have:Offline for the record, import a local file, the export of data to a local function, modify data, deleting data, task distribution and collaboration capabilities, real-time updates, offline data is allowed, filter functions, log management, provide the log view interface, can view the operation date, user operation, operation objects such as logging,Password change function, check the system has the function of copyright message and version information, see using help, help file browsing and download function, system exit functions, can be directly out of login to the system interface, function of separation of powers, manager access points garden, garden designer permissions and visitors permissions, access login system shows different function interface.

12 . The techniques required are:
1） Sensor technology. Used to monitor the state of the garden landscape.
2） RFID tag technology. It is used to attach labels to goods.
3） XML technology. Used to store both structured and unstructured data
4） Object-oriented programming techniques. It's used to write program code
5） Flash MX technology. Provides more client-side graphics and programming capabilities
6） SQL technology. To build a database
7） JavaScript. Add a variety of dynamic functions to provide users with a smoother and more beautiful browsing effect.

13 . Stakeholders include:
Shareholders, creditors, employees, consumers, suppliers, competitors, government departments, local residents, local communities, media, natural environment, human offspring, etc.

B . A system request document.

1 . 0 Summarize

This is a System that manages stock, sales, and allows garden centers to track their sales, deliveries, inventory levels, and purchase orders, providing tools to help garden designers complete their designs, and ordering stock needed to build newly designed gardens.

2 . 0 Objectives and Objects

This system targeted at garden managers, garden designers, and tourists.

3 . 0 Scope Statement

Choose identity: garden manager, garden designer, visitor.

Select to register or log in to the system.

Manager interface: check inventory, contact merchants to buy raw materials, check suggestions or complaints from tourists, assign work to designers, put goods on shelves, check orders, and sell stocks.

Designer interface: check the inventory, apply for the use of inventory items, design routes, design landscape, and accept the work assigned by the manager.

Visitor Interface: View routes, buy stocks, view views, buy views, make suggestions or complaints about the garden.

4 . 0 Software Content

The application is used to enable the holders of garden shares to make profits by selling stocks and commodities, to enable the managers to better grasp the information and management of the garden, and to enable the designers to better understand the needs of visitors, so that visitors can view and buy their favorite commodities.

5 . 0 Main system parameters

1 . With offline record function
2 . Have the function of importing local files
3 . Have the ability to export data to local
4 . Have the function of modifying data
5 . Have the function of deleting data
6 . Have the function of task distribution and collaboration
7 . With real-time update status function
8 . Offline data filling function
9 . With screening function
10 . Support log management, provide log view interface, you can view the operation date.
11 . operation user, operation object and other log records
12 . Support for password changes
13 . Support to view system copyright information and version information

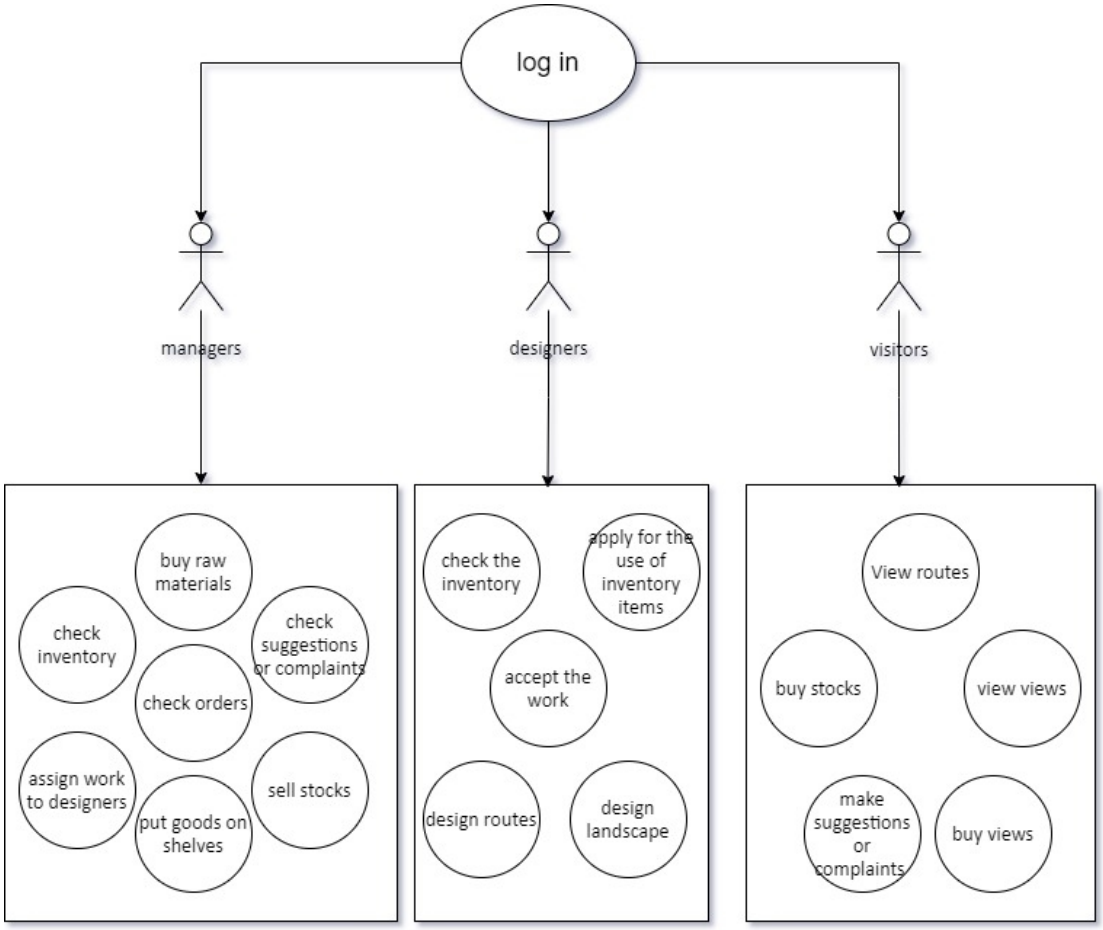
14 . Support the use of help, provide help file browsing and downloading functions

15 . Support system exit function, you can directly exit to the system login interface

16 . Support three functions of separation of powers, which are divided into garden manager

17 . permissions, garden designer permissions and tourist permissions. Login system with different permissions will display different functional interfaces

6 . 0 structure chart



C . A technical feasibility analysis.

1 . Product and technology development

Key technologies include:

（1）Sensor technology.Used to monitor the state of the garden landscape.

（2）RFID tag technology.It is used to attach labels to goods.

（3）XML technology.Used to store both structured and unstructured data.

（4）Object-oriented programming techniques.It's used to write program code.

（5）Flash MX technology.Provides more client-side graphics and programming capabilities.

（6）SQL technology.To build a database.

（7）JavaScript.It is used to write client-side script code.

Annotation:

SQL technology lags far behind, making the system inefficient, and in some cases, employees have replaced inefficient systems with spreadsheets and paper forms.

2 . Discussions on technical maturity and product reliability

The company has professional managers and designers, mature production technology, goods can be directly labeled for sale, high safety.

3 . Raw material source analysis

Raw materials are mainly design tools and consumables, which need to be purchased from other manufacturers. Other raw materials are produced inside the garden.

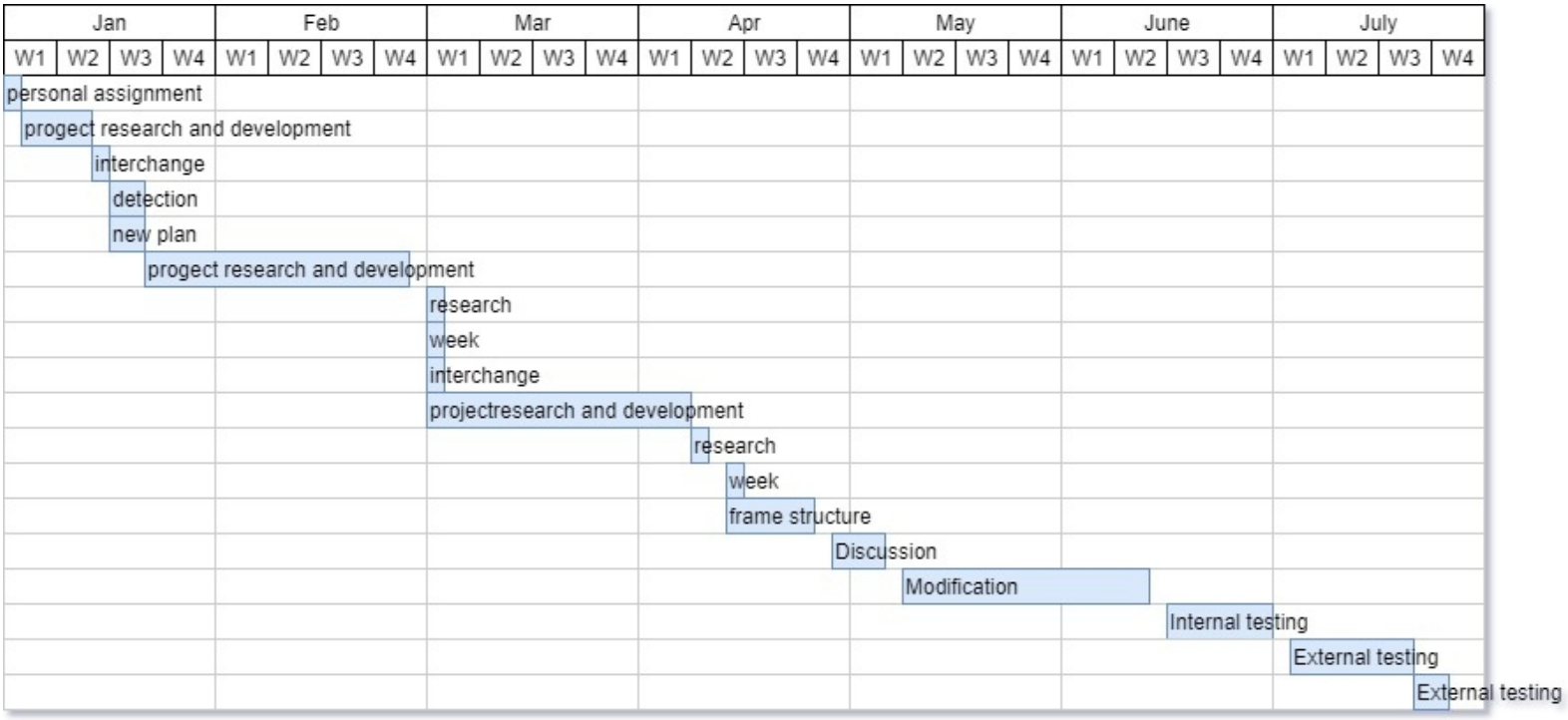
4 . Environmental protection and labor safety

Production of green plants and other landscape crops, waste can be used as wood, etc., very friendly to the environment.And the designer of the landscape cultivation and pruning of the labor safety is very high.

5 . Technical risk analysis

The technical difficulty is that the immature database functions have made the system inefficient and, in some cases, employees have replaced inefficient systems with spreadsheets and paper forms.

D . A Gantt chart for the analysis, modelling and high level design part of the project.



E . A recommendation about the most appropriate systems development methodology for the project and reasons for the recommendation.

（1）Minimize personal assignment as much as possible to free up more time for communication and collaboration with the team.

（2）The detection and the new plan were carried out simultaneously.

（3）After the first round of project research and development,A new round of research, week, interchange and project research and development followed.

（4）Then do new research to prepare for new week and frame structure during about two weeks.

（5）After one week discussion, carry out a month of modification work.

（6）Do three kinds of testing work, including internal testing, external testing and external testing.

F . A description of the team you will need to perform the analysis, modelling and high level design, the roles each team member will play and the reason they are needed.

（1）There are a lot of business process, modeling analysis and preparation problems need to analyse, so we need some analysts to help the team to analyse.

（2）There are a lot of distribution of personnel, oversight, and funds (include inputs and pay of compiler) work to do, so we need management team to solve them.

（3）There are a lot of interactive design and design of interface work to do, so we need interface designers team to do them.

（4）There are a lot of small window developers, traffic conditions alert developers develop self-driving developers and delivery developers work to do, so we need developers team to do them.

（5）There are a lot of functional testing performance testing and system alignment work to do, so we need testing team to do them.

G . A requirements gathering plan. How will you gather requirements and why, and which requirements do you need specifically?

A . the input

1 . Project charter: record the project overview and formulate detailed requirements.

2 . Project management plan

（A）Scope management plan: to define and develop information on the scope of the garden system project.

（B）Requirements management plan: to collect, analyze and record information on the requirements of the garden system project.

（C）Stakeholder participation plan: learn the communication needs and participation degree of the stakeholders from the stakeholder participation plan, so as to evaluate and adapt the participation degree of the stakeholders in demand activities, and ensure that all the stakeholders can participate in the work of demand collection through the plan.Use the Participation Plan to find a management strategy if any of the stakeholders are not willing to address the actual requirements.

3 . Project documents

（A）Assumption log: identify assumptions about the product, project, environment, stakeholders and other factors that will affect requirements.

（B）Register of lessons learned: provide effective requirements gathering techniques, especially for projects using iterative or adaptive product development methods.

（C）Register of stakeholders: it is used to know which stakeholders can provide information on requirements and record their demands and expectations for the project.The stakeholder register contains contact information for all stakeholders to provide their needs, and the stakeholder register also records some of the needs and expectations that were recorded when the stakeholders were identified.

4 . Business Documentation: The business argument describes the necessary, expected, and optional standards that should be met to meet the business needs.

5 . Agreement: will include project and product requirements.

B . the tool

1 . Expert judgment

2 . Data collection

（A）Brainstorming: it is used to generate and collect various ideas for the project requirements and product requirements of the garden system.

（B）Interview: obtain information by talking directly with relevant parties.Interviews typically involve asking the interviewees preset and impromptu questions and recording their answers.An interview is often a "one-on-one" conversation between one interviewer and one respondent, but can also include multiple interviewers and/or multiple respondents.Interviews can also be used to obtain confidential information.

（C）Focus groups: convene the intended stakeholders and subject matter experts to understand their expectations and attitudes towards the product, service or outcome under discussion.An interactive discussion is led by a trained facilitator.

（D）Questionnaire survey: a series of written questions are designed through the formulation of a detailed questionnaire, and the respondents answer accordingly to collect data, so as to quickly collect information from a large number of respondents.

（E） Contrast: comparing actual or planned products, processes and practices with the practices of other comparable organizations in order to identify best practices, form suggestions for improvement, and provide a basis for performance evaluation. Comparable organizations used for contrast can be internal or external.

3 . Data analysis: find problems by analyzing the real usage of a large number of users, interpret the data, discover the business meaning behind the data, and find improvement points.

4 . Decisions

（A） Voting: unanimity, majority principle, relative majority principle.

（B） Authoritarian decision-making:

（C） Multi-criteria decision analysis: with the help of decision matrix, system analysis method is used to establish various criteria such as risk level, uncertainty and value return, so as to evaluate and rank numerous ideas.

5. Data presentation

（A）Affinity Chart: a technique used to group a large number of ideas for further review and analysis.

（B） Mind mapping: the ideas obtained from brainstorming are integrated into a map to reflect the commonalities and differences among the ideas and stimulate new ideas.

6 . Interpersonal and team skills

（A） Nominal group technique: used to facilitate brainstorming, ranking the most useful ideas by voting for further brainstorming or prioritizing.

（B）Observation and conversation: directly observe how individuals perform their work (or tasks) and implement processes in their respective environments. When product users have difficulty or are unwilling to articulate their requirements, it is especially important to observe the details of their work.

（C）to guide

User Story: A short, written description of the required functionality, often produced in a requirements workshop.

7 . System interaction diagram: a visual depiction of the product scope, showing the business system (process, equipment, computer system, etc.) and how it interacts with people and other systems (actors).

8 . Prototyping: build a prototype of the desired product before actually manufacturing it, and then solicit early feedback on the requirements.

C . output

1 . Requirements document: Describe how the various single requirements will meet the business requirements associated with the project.

2 . Requirements Tracing Matrix: Links product requirements from their source to deliverables that meet the requirements.Use the requirements tracking matrix to link each requirement to a business goal or project goal to ensure that each requirement has business value.

D . in addition:

1 . The existing system that manages stock and sales is too old to use.

2 . There are many new requirements need to be satisfied, such as track its sales, deliveries, stock levels and purchase orders and so on.

3 . To ensure that the new system can meets all requirements for sales, management stuff and customers.

4.which requirements need specifically:

（A）Track sales, deliveries, stock levels and purchase orders

（B）Help garden designers to do their designs

（C）Order the stock necessary for the newly designed gardens to be constructed

H . The suite of diagrams and documents that you will produce (you do NOT need to produce the actual diagrams, you are merely deciding which ones will be produced at a later stage) and why, the role each will play and the approach you will use to ensure consistency and balance between them. You should also describe the different levels of detail in the diagrams (conceptual level, logical level).

1 . Users with different identities log in with different login charts, which record the account number, password, identity and other information of the login.

2 . Garden Manager:

（1）After the garden manager logs in, he can enter the inventory interface to view the inventory chart. At the same time, he can modify the contents of the chart, import local information, export information to the local area, delete the contents of the chart and other operations.

（2）Order charts are generated when raw materials such as tools and consumables purchased by the garden manager are stored in inventory. The tables contain information such as purchase time, name and quantity of purchased item, cost of purchased item, buyer, etc.

（3）When the garden manager assigns the work to the designer, the work assignment chart is generated, which contains the work title, work time, work place, staff, work details and other information.

（4）When the garden manager generates labels for the goods, affixed labels and put them on the system program, the information chart of the goods will be generated. The table contains information such as the name of the goods, the picture of the goods, the price of the goods, and the description of the details of the goods.

3 . Garden Designer:

（1） After logging in, the garden designer can view the inventory surplus of tools and consumables, apply for use and generate an application chart, which contains the application name, application quantity, application time, applicant and other information.

（2）When designing the road map for the garden, the garden designer generates the route chart, which includes the information of the buildings, the landscape, the routes, the exhibition areas and the commodities in the garden.

（3）When designing the landscape, the garden designer will generate the item information chart, which includes the item name, item quantity, item picture, item detail introduction and other information.

（4）When the garden designer accepts the task assigned by the garden manager, he/she generates the work chart, which includes the work title, work time, work place, staff, work details and other information.

4 . Traveler:

（1）After logging in, tourists can generate charts of stocks and commodities purchased, including purchase name, purchase quantity, amount spent, purchase time, buyer, delivery address and other information.

（2）When visitors make suggestions or complaints for the garden, the chart will be generated, including the content, time, personnel, remarks and other information of suggestions or complaints.

I . A stakeholder engagement plan. Who are the stakeholders, how will you involve them in the analysis, modelling and design process, and why?

Stakeholders:

Shareholders, creditors, employees, consumers, suppliers, competitors, government departments, local residents, local communities, media, natural environment, human offspring, etc

Among them, stakeholders are divided into direct and indirect. Direct stakeholders are those who directly deal with the enterprise in the market, mainly including shareholders, employees, creditors, suppliers, retailers, consumers, competitors, etc. Indirect stakeholders refer to those who have non-market relations with enterprises, such as the central government, local governments, foreign governments, social activity groups, media, and the general public.

Garden managers should collect directly generate economic benefits to the company's stakeholders spending habits, software use habits and Suggestions or complaints and other information for analysis and modeling, so as to design more in line with the consumer market, and then for the designer assigned tasks, so as to attract more consumers and other stakeholders and maximize the benefits of the garden.

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