Development Frameworks & Methods

Course: COMP1648

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Introduction:

Walk2Live (W2L) is steadily growing business organization. This is a health and fitness franchise that was so over the last 20 years. Currently Walk2Live has 55 franchises in different towns and cities across the UK. They have managed their business fragmented process but now they want to develop a centralized system and an e-commerce website.

Section A- Management Summary

There are two parts in this section of the document. Those are contention of the Justification of using DSDM Atern and the advantages and disadvantages of DSDM Atern.

A1. Justifying DSDM Atern to be appropriate for "Walk2Live"

- Currently W2L is a business organization with a head office and 55 franchises across the UK. Each franchise manages their business manually through spreadsheets and an informative website. But after meeting with Scott Runner and team of W2L. W2L cleared that they want a centralize system to manage the whole business process rather than the fragmented process. Franchise can keep track his staffs, classes and charities. They have specific business objectives to develop the new system.

  DSDM strategy is appropriate for W2L on the grounds that DSDM is useful to illuminate the key objectives and it works with those projects in which business vital objectives are obviously characterized with the goal that they might convey the correct solution at the perfect time.

- Ben wants to develop the full system before the year end, and he was hoping that the new system will be helpful to sell products to the general people. The CFO has set an objective of getting the e-commerce system fully operational within 3 months and following 3 months for beta version.

  DSDM set a delivery time in the beginning of a project and also deliver this within the time. To satisfy this principle, DSDM Atern teams must Timebox the work and maintain clear focus on business needs. DSDM Atern builds up a reputation for delivering the project on time. DSDM stern also focus on early delivery.

- Scot Runner and general staffs want the centralized system as soon as possible. The CFO has said that at first delivered the beta version of the centralized system, the current system will be replaced after completing the full system.

  To ensure early real business benefit DSDM pursue incremental delivery. Develop the beta version with limited functionality for the restricted number of users. This will help to develop the final solution and enhance the stakeholder confidence. Incremental delivery is suitable for developing and delivering the system.

- Janet and Ben identified the requirements, and then Scott Runner decided that he needed more information about the requirements of "Alive" and schedule a facilitated workshop with selected members of the organization. Some requirements were added and some were removed after the facilitated workshop.

  DSDM Atern welcome changes during the development process which is a big strength of DSDM Atern. This used for developing appropriate business solution for stakeholders. As well as fulfilling the user's expectation the solution will be to be perfect.

A2. Advantages & Disadvantages of DSDM

Advantages of DSDM

The advantages of DSDM are given below:

- **Less likely to develop faulty systems:** DSDM prevents developing a wrong system by constantly evaluating the system by the system stakeholders. So the new system Alive will be more accurate for client involvement.

- **Ownership:** In spite of the fact that the clients include with a project effectively to recognize the best possible solution so that at once they feel that it is theirs and furthermore more prone to guarantee the proprietorship of the project. This brings out more suitable business solution against the issues.

- **Focus:** DSDM Atern focusing to the real business requirement to develop a project.

- **Better training:** The client will be better prepared in DSDM Atern. Since the client delegate will be included with the project development team all through the project development lifecycle what's more, they will likewise recognize effectively of those individuals who needs training.

- **Collaboration:** Due to a decent relationship between client and developer the development of the solution go easily and in the event that anything turns out badly, the client can ask the developer team effortlessly.

- **Adopt changes:** In the event that any adjustments in necessities are occurring amid the project, DSDM dependably welcome that and actualize the upgraded one in the project that outcomes a more productive solution.

- **Confidence:** DSDM's development methodology kept running inside a settled time plan that is called Time-box, which finishes a task timely. As far as possible the limited time of 4 months, the project will develop within this time period.

Disadvantages of DSDM

- The possible users of Alive, they want the new system will work for full fill all requirements. In any case, DSDM focus on the prerequisite that the business really require, not, however much as could reasonably be expected.

- There need a collaboration between W2L and the developer team. W2L have to compromise their valuable working time for proper collaboration.

- If the stakeholder involvement is not possible, this will be the reason of fail this project. Because of DSDM highly depends on the involvement of the stakeholders.

Section B- (High level requirement analysis and MoSCow prioritization)

The High level requirements are the most summed up the breakdown of system requirements. This level compares to significant system capacities or business processes. How the system should behave it depends on high level requirements.

B1.1 Requirements that are inappropriate high level requirements –

Identifying inappropriate high level requirement

1. **Easy to use**

    This requirement is for making the system easy to use for the users. This will increase the system usability and interaction. This is non-functional requirement.

2. **Quick to load**

    This is an inappropriate high level requirement because this mention to system faster execution and faster response. This is a non-functional requirement.

3. **Hosting the website**

    It implies distributing the system on the web. To build up the system, it isn't Any utilitarian requirement to pursue. It needs to reach to the general population, not to build up the system and it is an operational requirement moreover. So it is likewise an inappropriately high level requirement.

4. **Register URL**

    This requirement is for uniquely finding this site on the internet. It will ensure the site availability in anywhere. There is no functional job so it is an inappropriately high level requirement.

5. **Replace the current systems**

    There want the old system replaced by the new system and this is an operational requirement not a functional requirement.

6. **The look and feel of the website should resemble the healthy lifestyle we are selling.**

   The website should resemble with the business objectives, the website design should be express about the healthy lifestyle and selling health product. The interface design is not functional job, so it ensures that it is an inappropriately high level requirement.

7. **Opinion "For the most part we can use the …………..database in MS Access."**

   This is an inappropriate requirement. Because this is just an opinion, it doesn't represent any requirement

8. **Could I ship online orders in my area and get the money for those sales?**

   This is an inappropriate requirement. Because it's a question to the developer team, it doesn't represent any requirement.

9. **Clients can use the system like Facebook**

   This isn't an actual requirement, it's just a hope. Franchise owner wishes this system will be like Facebook. Here is no functional need; hence it is an inappropriate requirement.

B1.2 Identifying Appropriate High Level Requirements

Identifying Appropriate High Level Requirements

1. **Customer registration & login**

   The system needs customer registration feature with their email address to keep customer information and login feature for authentic access to the system and enabling the customer to pay membership fees, class booking and joining clubs. The system will

send them marketing materials to the customers email. So this is an appropriate high level requirement for the new system "Alive".

2. **Search and browse the product**

This feature will increase the productivity of system and this is an appropriate high level requirement to make the system is more user friendly to the customers. Any of the customers can search and browse the products whether they are logged in or not in the system. This system allows all users to browse and search the products.

3. **Customer communication and feedback**

Customer communication is becoming more and more important. So that the customers of W2L can query about products and service, then business authority provides them the necessary information. The system should manage a community feature for customers, so that they can able to find out their classmates and make contact. The customer can give his opinion and rating on products. This is a high level requirement for this system development.

4. **Return product**

This requirement is about the system will be allowed the customer to return their purchased product. The business organization will be more reliable to the customer for this feature. So for the consumer loyalty and enhance of the business this requirement is essential.

5. **Bookkeeping service**

This function will handle the process of recording and analyzing all of the financial transactions of the business. This is required for keeping accounts of expenses, purchase, sale, salary and income of the business.

6. **Product Selecting and purchase**

   This function is enabled the customer to select products for purchase and pay for this product. This system will provide a better transaction feature to receive payment. This is also an appropriate high level functional requirement.

7. **Order and shipment**

   This requirement specifies that how a product reaches to the centers. The system should record all relevant information. The system also able to order marketing materials and product from the head office.

8. **Manage stock level**

   This is a high level requirement because the organization needs to keep stock information of juice bar items. This will help the franchise owner to order new item.

9. **Manage employee**

   This is an appropriate high level requirement because the franchise owner wants to track his staffs and pay staff using the system.

10. **Produce report**

    The system should provide multiple reports such as online product sales and compare these sales at the centers themselves. It will help the organization to take the decision by analyzing this report.

11. **Oversee the Franchise**

    This requirement is about the business authority will be overseas the whole business process such as monitoring clients, active, charities, staff, etc. This feature gives them the ability to control the business.

12. Rating and feedback

This requirement is for enabling the customer to give their feedback and give rating on a product. This will helpful to the organization, authority to understand the customer expectation. Customer can easily find out the good rated product. This is not an essential requirement but it will help get more customer reaction.

B2 Prioritizing Requirements by Using MoSCoW Rules

B2.1 Prioritizing the requirements for updated high level requirement list by MoSCoW prioritization.

Elaboration of the term MoSCoW refers to:

M = Must Have

In the final solution which requirement must be fulfilled that are described in this point. The project cannot be successful without them so these are non-debatable requirements.

- Customer registration & login
- Search and browse the product
- Product Selecting and purchase
- Order and shipment
- Manage stock level
- Return product

S = Should Have

A high level requirement that consider as important, but not vital. Those requirements are placed here and such necessities involve the second place in the requirement list.

- Oversee the Franchise

- Produce report

- Manage employee

C = Could Have

A wished requirement, but not vital. As indicated by the technique, If the project timescales are not enough to implement this this point will be dispelled this requirement.

- Customer communication

- Rating and feedback

W = Won't Have

A requirement that won't be executed in the first version, but it may be incorporated in future development. Those requirements as a rule don't influence the project achievement. (blog.ganttpro.com, 2016)

- Bookkeeping service

B2.2 Justification against prioritizing high level requirements

Must Have

- **Customer registration & login**

    Justification:

    Customer registration and login is an essential requirement for W2L. Because W2L wants to gets customer information including email address to send them marketing materials. Customer should be login to book classes and join clubs. Customer also can pay membership fee.

- **Search and browse the product**

    Justification:

    Search and browse is a most vital requirement to complete the system. Without this feature customer can't able to find out desired product. Customer can search and brows product whether they are logged in or not.

- **Product Selecting and purchase**

    Justification:

    This is most essential requirement for W2L. Because product selling is one of the most important portion of W2L. So customers have to select product and purchase it. And complete the purchase process by paying payment for the product. This function will be helpful to enhance this organization.

- **Order and shipment**

  Justification:

  The franchise owner wants to order marketing materials and products for his centres. This feature is most important because of without purchasing a product the centres can't sale any things and the system will be unproductive.

- **Manage stock level**

  Justification:

  Without getting stock information franchise owner can't able to order fresh fruit and vegetables for juice bar. Therefore the juice bar can be damaged in business. So this is an important requirement for this system.

- **Return product**

  Justification:

  This requirement will be make the business more reliable to the customers. If the product is defective or if customer unhappy with this product business will return this to gain customer satisfaction. Therefor this is a must have criteria.

Should Have

- **Oversee the Franchise**

  Justification:

  The franchise owner wants to track his clients and booking, staffs and what classes they teach charity and charity events. This is important to manage organization, but not required for getting system benefits. The system may run without this function. So this is appropriate for should have criteria.

- **Produce report**

  Justification:

  This requirement for generating reports about online product sales and compare these sales at the centers themselves. It will helpful to W2L for take future business decision. But this is not a fundamental requirement for getting benefit from the system. Therefor this requirement in should have criteria.

- **Manage employee**

  Justification:

  The requirement is about the keep tracking staffs of franchise. Staffs activity like what class they teach. Staffs will receive their payment. This feature is required but not essential. So this requirement is on should have category.

Could Have

- **Customer communication**

  Justification

  This refers to could have criteria because this feature will helpful to build communication between customers and find out their classmates. This is not so essential but if it develop this will helpful to the customers.

- **Rating and feedback**

  Justification:

  This requirement is for getting customer feedback about the product and enabling the customer to give rating on product. This is not fundamental business requirement. So this requirement placed on could have section.

Won't Have

- **Bookkeeping Service**

  Justification:

  W2L is an organization with the number of employees. Business cost will be increased for recruiting extra employee for managing bookkeeping service. This bookkeeping service not required right now for W2L. So development time should not waste for less important function. Therefor this requirement is on won't have a section.

Section C – Legal, Social, Ethical and Professional Issues

C1 Management Summery about Data Controller

C1 (a) The Role of Data Controller within the Organization –

The health and fitness franchise organization 'Walk2Live' has been growing since last 20 years, which was founded by Janet Moore and her other friends. They used to maintain the processes through spreadsheets and newsletter by keeping the details of the members, their contacts and charitable walkathons. Gradually their organization evolved and decided to maintain the processes through a system which they named 'Alive'. They wanted to store all information and keep track of all the members, classes and programs. The organization will need to store huge amount of data in their new system. Maintaining these huge amounts of information and keeping them in a secure environment is an important task for 'Walk2Live'. In the purpose of providing a secure environment and handling those data securely, the organization is highly in the need of a Data Controller.

It is necessary for 'Walk2Live' to hire a data controller who will control and take all the responsibilities to keep their personal data protected following the legal, ethical, social and professional issues. Some serious legal responsibilities are carried by a data controller and the organization must be concerned about these responsibilities. If the organization fails to understand the responsibilities or to find a proper data controller, they can take consultation or advice of the Data Protection Commissioner. (synergy, 2013)

Replacing their regular processes with the system 'Alive', 'Walk2Live' must concern about their present reputation by taking proper steps to make all personal data protected.

The purpose of a data controller in an organization is to how they process personal data to make them secure and protected. Data controller processes those parts of a system where data need to be protected in a legitimate way. After processing data in a legitimate basis, data controller must ensure that the processing has met the principles of data protection. (ictlaw, 2018)

To keep data secure and protected in a legal way, 'Walk2Live' need the assurance of data controller. The role of data controller within 'Walk2Live' is to process their personal data following some rules and regulations to provide a proper protective environment which will intact the reputation of 'Walk2Live' and increase the business value.

C1 (b) Legal, Social, Ethical and Professional issues that 'Walk2Live' may face with –

Practical Example 1:

The organization 'Walk2Live' contains various kinds of personal and sensitive data to be stored in their system such as storing client's personal information, contacts, stock update, schedule and many more. The legal, social, ethical and professional issues related to this problem and the solutions for eliminating all the issues can provide a properly secured system.

Legal Issues: legal issues will appear if sufficient steps aren't taken for data protection to sustain confidentiality, integrity and availability which controls the accessibility of data that are allocated for specific persons. 'Walk2Live' can face many legal issues as they store huge amount to personal data and additionally many important data related to the company so that any unauthorized person may misuse their personal data by hacking the system which can cause extreme legal issues.

Appropriate technical and legal measurements must be taken by data controller so that there is no unauthorized access or processing of data.

Ethical Issues: the organization may face ethical issues if there are any improper maintenance in the intellectual property rights, data utilization and data accessibility. 'Walk2Live' must assure data integrity from the beginning of planning and developing the system to be able to avoid all ethical issues.

Data controller must maintain the data protection act to assure data integrity.

Social Issues: 'Walk2Live' may face social issues if the organization allows all employees to access the information system where personal data are stored. It will violate the privacy of individual members of the organization and cause vulnerability of the system with poor data management quality.

Data controller can minimize these issues by taking proper steps for unauthorized access of any data.

Professional Issues: if 'Walk2Live' is incapable of protecting member's personal data from intruders then the reputation of their previous professionalism in working environment will be hampered and the organization will encounter trust issues among the members which will cause professional issues.

Data controller must follow data protection act and handle any issue lawfully so that all data can be secured and protected.

Practical Example 2:

'Walk2Live' want their new system 'Alive' would allow an ordering system through which they will market their materials, health food and other supplements. Selling products through online requires a secure payment transaction method. For handling the payment method 'Walk2Live' will require an electric payment method where customers will have to pay through credit or debit cards. 'Walk2Live' may face legal, social, ethical or professional issues while developing payment transaction process into their system.

Legal Issues:

'Walk2Live' may face legal issues while money transaction as it requires credit or debit card details. Some anonymous hacking group can hack individual customers account's password and card number and hack transaction to complete their own payment through other's card number.

Data controller can take legal steps like computer misuse act, data protection act, software policies, and copyright act to protect customer's data.

Ethical Issues:

Transaction issues are high when a system contains payment method. Some hacking groups are intending to do cyber-attacks to all the personal and sensitive transaction data which are the ethical issues that breaks human rights and ethics. Hackers can misuse those data. Data need to be encrypted whenever there is a payment method into the system to reduce the possibility of hacking the personal and sensitive data.

Social Issues:

Social issues are occur when there is lack of trust between the system and customer while payment transaction process. 'Walk2Live' may face social issues as customers are unable to keep an eye on their sensitive data after providing to online party.

For reducing this issue, digital certificate can be used which uses secured key encryption and public key encryption so that shared information cannot be accessed without them.

Professional Issues:

Professional issues occur when technologies are used in a negative purpose. While providing transaction details in the system, hackers can hack those details and sell to third party for marketing purpose. There are many hacking websites that publishing computer hacking methods and instructions which acts as a threat for transaction processes.

Data controller must follow the data protection act and handle each data lawfully to keep them secured and protected. (Samadara Methmali, 2015)

C2: Purpose of BCS Code of Conduct

Nowadays in IT industries, privacy and security issues are having a significant impact when it comes to the discussion of securing sensitive data like financial or legal information. Providing a secure and protective environment for such information is the primary task for IT professionals which should be concerned about from the early period of development.

BCS (British Computer Society) Code of Conducts specifies some professional standards which is responsible of controlling and monitoring the behaviors of the professional matters of its members. In information technology there are various multifaceted demands are found, amongst them all are not appropriate for the system. BCS code of conduct is intended to help and direct the behaviors of their members with a proper guideline to select the appropriate needs which will fit in their system following the legal, ethical, social and professional issues. Each member are expected to follow these rules and standards of BCS Code of Conduct which are higher than the general laws so the members will have follow the rules strictly else they will be excluded from the membership. (scribd, 2012)

To illustrate professional issues, four BCS Code of Conducts are discussed below with a practical example –

1. Public Interest –

The purpose of this code of conduct is to be very conscious about the public health, privacy, security and wellbeing of others. The legitimate rights of Third Parties should be maintained. There shouldn't be any discrimination while conducting professional activities. Promoting the rights of equal access and other social opportunities should be included to the benefits of IT. As the system of 'Walk2Live' organization's main task of the business is to interact with their customers and dealing with their data so the organization must conscious about their customer's privacy and security. For controlling this situation they conducted a data controller who will ensure data security, data authorization and protecting confidential data.

2. Professional Competence and Integrity -

The purpose of this section is that the IT professionals should be able to manage only those works or services which are under their professional competence. They should be aware of maintaining technological standards and develop their knowledge and skills in accordance with the relevant fields. They must respect and value the viewpoints of others. The 'Walk2Live' has the requirements of developing new ordering system so that they can sell their health food and supplements to the general public. For developing the ordering system the IT professional must include money transaction process so that general public can complete payment through the system. Developers must concern about the technological standards and legal issues for developing payment method as it contains sensitive data.

3. Duty of Relevant Authority –

This section is about carrying out the professional responsibilities following the requirements of authority. The developers should handle any situation with diligence and patience so that there are no conflict between the developers and authorities. Developers must not disclose any personal information without the permission of authority. Taking advantage of the confidential data will be assumed as misrepresentation of information according to the BCS. While developing the new system for 'Walk2Live', the developers must concern about the professional responsibilities by following the requirements provided by the owners of 'Walk2Live'. During that time, developers must handle any disagreeable situation politely without creating any conflicted environment. Moreover 'Walk2Live' may face any competitor who will try to disclose personal information without the permission of organization.

4. Duty to the Profession –

The purpose of this section is accepting the personal duty so that the developer can uphold the reputation of their profession and don't do anything unprofessional which will disrepute their profession. As 'Walk2Live' is reputed organization for their previous working processes, developers must concern about sustaining that reputation by their development, use and enforcements. In addition, developers must act with integrity and respect so that all the professional relationships within the 'Walk2Live' are well maintained throughout the running process.

(bcs.org, 2017)

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