Requirements Management

BSc (Hons) COMPUTING

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1 Introduction

1.1 Lizzie's Leather Belts company

Lizzie's Leather Belts is an average company the company has supplied and sold over 50 different types of leather belts. The company is 10 years old and has grown steadily over the past year. The company grows mainly from aggressive marketing and marketing efforts that target local retail stores. Now they want to expand further by offering leather belts to users through a website. It is planned that this website must be implemented in 3 months from now.

The Lizzie Leather Belt Company faces a big challenge: it doesn't have its own software development department and contracts with their software development projects. However, the CEO was disappointed with the issues related to 'waterfall' projects. The previous tradition especially lacked the management support for changing requirements during project development. After many interviews with various software development companies, she decided that Lizzie Leather Belts will use real concepts to develop their websites using the concept of SCRUM and Agile - one of The most used software development models today.

- **The Managing Director** - She is the project's biggest driving force behind and the budget holder. She also spent a lot of time on a busy diary to have the necessary supplies for this project.
- **The Finance Director** - someone who wants to get involved but can easily do the perfect job and Chief Financial Officer who is always too busy to attend meetings.
- **The Operations Director** - who has been with the company for 2 years and is a senior team member from the business community in an Agile software development project at an old job. He provides documents and is responsible for the Order Clerk and will provide at least one copy available to the project and empower them to make decisions.
- **Chief Accountant** - is the representative of the Chief Financial Officer at meetings and is empowered to make decisions on behalf of the Chief Financial Officer. Rich experience for having worked in all parts of the company over the years. Also, the Chief Accountant passed the accounting exam 2 years ago.
- **The Warehouse manager** - someone who is not available for the project but they are happy to make at least one Operator Warehouse available to the project and empower them to make decisions on her behalf.
- **The Marketing director** - who is important and available to the project. Besides, the Marketing Director is also a certified Agile project and seminar project manager. With his knowledge and experience he can manage this project well.

1.2 Web-based order handling system

A web-based order handling system is a software system designed for businesses that is an important part of the sales process - the ordering process. It includes tracking orders from customers, order processing and execution organization, from when customers place orders until it is delivered to them. The trend of web-based order handling system usage is increasing in terms of its availability. From large corporations to small and medium businesses, they all need a web

application capable of providing solutions to handle their orders well. (Carpenter, 2012)

Advantages

- **Better user experience:** With a responsive design it will fit multiple screen sizes and is compatible with many different platforms.
- **Secure login:** Customer information will be kept secure and improved customer service with automated processes on the website.
- **Stay competitive:** Today, consumers still shop in stores and are much bigger than online shoppers. But online shopping is expected to grow rapidly with 56% Gen Xers and 67% millennials in the US. Because it has increased by 300% in recent years with 700 billion dollars in revenue just last year. (digitalmarketinginstitute, 2020)
- **Reduce costs:** It helps businesses save a small cost compared to traditional settings and this will reduce high risks when businesses have an investment in wed-based.
- **Easy to expand and grow:** They can easily optimize and expand their budget and expand their business size if they see an opportunity to grow from their potential customers. For example, if a business running Facebook ads, they can easily add these ads to match the shopping behavior of customers. (Fox, 2018)

Disadvantages

The risks that businesses can face when applying web-based such as May lose access to important data with internet downtime, hackers attack, malicious code. Another drawback is the access speed, the system will reduce the access speed when signs of overload. Also, businesses still need experienced staff to manage and maintain the system well and handle errors arising during operations. (Fox, 2018)

1.3   Software development methodologies

During a project, group leaders will have to make many decisions. One of the first and important decisions group leaders will make is to choose which project management method to follow. Software development methods help determine the process that the development team follows to deliver good and timely customer satisfaction. Therefore, group leaders will need to choose to use different methods based on their goals, time, budget and other factors that are appropriate for their project. (smartsheet, 2020)

Here are some common software development methods today:

Waterfall Methodology

According to (lvivity, 2018) Waterfall model is a linear life cycle model, each model must be completed before the next start. The waterfall model has no overlapping phase, the budget and time are very tightly fixed. At the end of each phase, the team leader will have to assess to determine if the project is on track and whether to continue or remove the project. Waterfall model is developed in 5 stages as follows: Requirements analysis, Design, Development, Testing, Maintenance.

Advantages: It is simple, easy to understand and use. Requirements are clearly and accurately defined and there are no changes in the project development process. And lastly, the waterfall model is suitable for small projects.

Disadvantages: When an application is in development, it will be difficult to go back to the previous stage. A large amount of risk and uncertainty. It is not a good model for long, complex and object-oriented projects. (lvivity, 2018)

Agile Methodology

The Agile model is common in current software development models, it is like a type of Incremental model. Software is developed in incremental and rapid cycles in a project. Users can change or add requests at any stage in the project. Each iteration of the agile method takes 1 to 4 weeks. Each release is thoroughly tested to ensure the software quality is kept stable throughout the project development process. (Tester, 2019)

Advantages: The main benefit of agile software development is that it allows the software to be released in iterations and that customers can change or add requirements at any stage. It focuses on the effectiveness of the team and everyone can take responsibility and own parts of the project.

Disadvantages: Team members must be highly skilled in many areas. Also, the end product may be very different because there may not be a definitive plan at the beginning. (smartsheet, 2020)

SCRUM Methodology

Scrum is the most common process for implementing Agile. It is an iterative software development model for managing complex software and product development. SCRUM has teams of up to 9 members, and with a minimum of 3 members, they will divide their work into timed actions that are sprinting. Repeat lengths are fixed for 2 weeks, but some last for a month. Stakeholders and team members will meet and meet for 15 minutes to plan the next steps after each sprint. Scrum consists of three main roles: the product owner, the Scrum master and the team. The product owner will represent the company. The Scrum Master is a project manager, controller and process tester. The group is made up of people who will perform the tasks in the project. (Chandana, 2019)

Advantages: It helps teams get work done quickly, efficiently, and cost-effectively. It helps team members to track their efforts in daily meetings. Also, it is easy to change based on customer feedback.

Disadvantages: If individuals are not responsible, the possibility of project failure will be very high. It requires the Group to be very experienced and committed. Also, the cost and duration of the project will not be accurate if the tasks are not specified.

1.4   Why should be choose SCRUM with Agile method?

There are many software development methods that large companies are applying and among them is the Scrum / Agile software development method which will be suitable for the LLB project.

Here is why LLB should choose Scrum / Agile as the software development method for their project:

Shorten software development time: LLB wants to expand further by providing leather belts to the public through a website that must be deployed within 3 months. If the Waterfall method uses a lot of time (6 months), then Scrum / Agile is the most reasonable choice because this method provides the product to the final customer 40% -50% faster than the method traditional. Because the Scrum / Agile model breaks down the software into Sprints, and each Sprint only takes 2 to 4 weeks to complete. This will help LLB get the website after 3 months.

Changes easily: With Waterfall once the project's stage is completed, it is difficult, costly to go back and change that stage as needed, which is one thing that makes the LLB CEO expressed disappointment with the limitations and rigidity of Waterfall in applying it in the project. Scrum / Agile, meanwhile, allows software developers to do it and stakeholders do it every Sprint. Although the time to complete the website within 3 months is short, LLB staff can update regularly, freely make new requests, receive continuous feedback, and quickly adjust to ensure quality. highest software. If there is an unintended risk of developing a website, they can easily eliminate those agents without fear of affecting other requirements of the project.

An experienced team environment: It is special for LLB that have employees who have experience working with Scrum/Agile software development projects. The first is the Operations Director who used to be a senior team member from the business community in an Agile software development project at a previous job. This helps him to have experience when making the right decisions for the project. Next, the Marketing Director is a certified agile project manager and project manager. And finally, True Concept Personel they have Jonathan, he has worked on several Agile development projects as a Team Leader and has a very good knowledge of website development. For such experienced employees, the selection of Scrum / Agile is very suitable for project management, they are the ones who understand the project requirements and customer needs; Since then the project completion time will be faster.

Risk mitigation: Scrum/Agile is self-managed and self-organizing, although LLB employees have different experiences it helps team members have fun working together and encourage the User participation in the entire project implementation process, making customers happy and reassuring about the project. This is because the Scrum team sees customers as partners and keeps customers involved in the project. The LLB, which applies Scrum/Agile, will minimize the risk to the project and increase the chances of the site being accepted by stakeholders and will be completed soon.

2 Requirement analysis and MosCoW prioritization

2.1 Identify of non-functional requirement with reason of choice

After looking into the requirement table, some requirements are non-functional requirement and it was inappropriate for high-level requirements as follows:

ID	Requirements	Type	Reason choice
1	As the Finance Director I want all online transactions to be secure so that our customers feel safe	Non - functional	Data privacy is a non-functional requiremen, this is just security of the system. It helps the system is protected from unauthorized access to the system. It does not affect the functional system.
2	As the Managing Director I want to be ensured that the site is Data Protection Act safe so that we do not get fined hundreds of thousands of pounds	Non - functional	Legal and regulatory requirements are non-functional requirement. In the Data Protection Act safe, it only describes product adherence to laws. It is a measure to control customer data and information. It does not affect other system functions.
3	As the Operations Director I want to accept all forms of payment so that we can capture the largest market possible.	Non - functional	This is a non-functional requirement because they want to accept all forms of payment to capture an important market. This is talking about the company's usability to use payment methods. They want to improve the quality of their services when customers buy their products.
4	As a Customer I want to have belts gift wrapped and sent to an address other that than my own so that I don't have to bother wrapping and delivering presents	Non - functional	It is a non-functional requirement and it a system attribute. This is only an order processing request when the user interacts with the system.
5	As a Student I want discounts on belts so that I can look cool at partics for minimal cost	Non - functional	This is a non-functional requirement because it is not a system requirement; it is only the opinion of the customer who wants the product will discount. The discount program for products and products will be sold to the customer is decided by the company.

6	As the Chief Accountant I want to the Web site to adhere to legislation regarding VAT so we are not hit with a hefty fine	Non - functional	Legal and regulatory requirements are non-functional requirements describing compliance with the law on professional ethics. It determines the company is reputable or not. This requirement is related to legal implementation and it does not affect other functions of the system

Figure 1. Non – functional requirement

High-level requirements that I feel are required for building the website:

1. *As a Customer, I want to log in through existing accounts like FB, Instagram, Google, etc. so that I do not need to provide in the information for the next login*

Explain: This will bring convenience to customers when they log into the system. They can provide complete information and manage their information easily. Besides, the company will get correct customer information, the company can defend customers' personal information easily and enhance the customer experience.

2. *As a customer, I want a shopping cart to store the products which I have chosen*

Explain: This will bring convenience to customers when they want to buy a product. Customers only need to select one or more products, the select products will be stored in the cart and the system will calculate the total price of products in the cart. If customers want to change, they can edit or delete products in the cart.

3. *As a customer, I want to access a website can be used on mobile devices*

Explain: Today, users use mobile devices more than desktops, and they use them to buy online on mobile devices more than they do on desktop or laptop computers. With the advantages of Google's search algorithm is mobile-friendly content, so organizations are developing websites that follow this standard. This increases the interaction with the website with users, making users feel convenient and easy to orders anytime if they want.

4. *As a Customer, I want to review the product information, size, and price, so that I know and trust when ordering products*

Explain: Most online shoppers never buy products without knowing the price information, how to use it for them. Product review is an essential part of an online store. This is help build trust and loyalty of the customer. These are essential for the product and the website should invest more in the information section to advertise quality products to users.

5. *As a customer, I want to receive a bill by my email after a successful purchase*

Explain: Send pay the bill by customer's Email after they buy the product is essential. Customers have the benefit to know the details of their orders. If the invoice is wrong customers can check and notify the website. Besides, Email is one of the ways to contact when customers

want to support the service. It can help customers understand the company has spent time interested and ready to assist if they want.

6. *As a Customer, I want to know the company's contact form, so that I can ask for support when there are product issues*

Explain: The contact form of a company with customers is very essential. When the product has some error or the customer wants to support, they only need to form which the company provided earlier. In particular, customer feedback can help the company understand and improve product quality. That is especially important when discussing comes to customer satisfaction.

7. *As a Customer, I want to choose a delivery location, so that I can get it easily*

Explain: Sometimes, things become is easier when customers pick up the product from the other delivery location. This makes it possible for customers to change delivery locations quickly and easily. Customers can pay an additional cost to easily update booked deliveries and choose to send a product to a more convenient shipping location for them. With this service, customers will be satisfied and trust using the company's products.

8. *As the Operations Director, I want to edit the product information in the warehouse*

Explain: When the company receives user feedback about the product, Operations Director will analyze and devise specific strategies to improve that product. Therefore, Operations Director can edit the product information contained in the warehouse and then notify the warehouse manager. This helps the company to have appropriate solutions for products and information about products delivered to users is accurate and quality.

9. *As a Warehouse Manager, I want to statistics on the number of product types in the stock, so that I can add the missing products*

Explain: Some companies may be lack of products when users order in bulk or the stock is lack. Therefore, a statistical table of the number of types of products in the warehouse is very essential. This allows Warehouse Managers to easily update the quantity and quality of products. They can notify the financial management department of the lack of products to add to the stock. The risk is the lack of product has been resolved.

10.   *As a Marketing Director, I want to link websites to social networks (Instagram, Facebook, etc.)*

Explain: LLB has been supplying our products for 10 years at local retail stores and now they want to expand their market with this e-commerce website. They need to expand the scope of advertising their products and known by many users as linking to other social networking sites such as Facebook, Instagram etc.. LLB should consider this commercial solution because they will make a huge profit when they invest advertising on this social networking.

2.2   The requirements using MoSCoW rules

I used the MoSCoW/Timebox rules to prioritize the requirements in "high-level requirements" list:

ID	Requirements	Priority	Days	Explains
1	As the Managing Director I want a monthly report showing the percentage of belts that have been sold via the Web site so that I can get a feel for the benefits, in terms of profit, that we are getting from the Web site.	**Should have**	3	**A monthly report should have provided to the Managing Director**. This helps the Managing Director easy to keep track of profits from the number of products sold. Based on the percentage of the belt sold through the website, the Managing Director can devise strategies and solutions for future risks and improve product quality and increase the interaction of customer.
2	As a customer I want to be able to modify my shopping cart so that I can change my mind about what I want to buy.	**Must have**	5	**The customer must have ability to modify their shopping cart**. This is an important function of the system. When customers choose a product to buy, it will be stored in their shopping cart. In the process of choosing a product, if they are not satisfied, customers can easily change their choice. This helps users feel comfortable buying products, increasing the user experience, and minimizing errors when printing the payment bill.
3	As a Customer I want to enter separate delivery and invoice addresses so that I	**Should have**	3	**The customer should have enter separate delivery and invoice addresses.** This is just the action of entering the information they want to add to the invoice when order. This
	can receive belts when staying at a friend's house.			function enhances user experience but without this feature, the user can perform other operations.
4	As the Finance Director I want all online transactions to be secure so that our customers feel safe.	**Must have**	6	**Online transactions must have secure so that our customers feel safe.** This is an extremely important feature when making payments online. If the system has any errors or the security of the system is not high, the customer's account information will be exposed and can become high risk when the information is stolen by hackers. It also reflects the quality of the system, which will determine the trust of customers when paying online through the system.
5	As the Managing Director I want to be ensured that the site is Data Protection Act safe so that we do not get fined hundreds of thousands of pounds.	**Could have**	8	**The wesite could have Data Protection Act safe so that we do not get fined hundreds of thousands of pounds.** Because the website follows the data protection of the legislation. It is related to usability of the system. If the system does not comply with the Data Protection Act when risks occur, the consequences are extremely serious and can be subject to criminal prosecution. Also, poor security will lose user confidence.

6	As the Marketing Director I want an 'About Page' so that we can promote the finer details of the brand.	**Should have**	3	**An 'About Page' should have made so that we can promote the finer details of the brand.** Because "an page" will focus on describing their Lezzie Belt company and business process. This helps customers get the information they need, they can compare prices, quality, models, before they order. Besides, "an page" introduction of the company will create confidence in customers with the company, helping the company to affirm the prestige and quality of products.
7	As a Customer I want a choice of delivery slots so that I can arrange my diary appropriately.	**Must have**	5	**The customer must have choice a delivery slots**. Because before payment, customers will fill the address to receive. It is easy for the delivery staff to find the correct customer address and delivery. Besides, this feature also increases user experience, increasing the accuracy of the system.
8	As the Warehouse Manager I want to place an 'out of stock' message on appropriate belts so that customers do not end up having to wait for ages due to belts being out of stock.	**Should have**	5	**An 'out of stock' message should have put on appropriate belts.** Because it relates to the sales system and customer experience. When customers order large quantities and products are not enough, this will reduce the quality of service. The company will not be able to deliver quickly in large numbers in a short time. Therefore, place an 'out of stock' notice on the appropriate belts so that customers do not have to wait long because the belts are out of stock.
9	As the Operations Director I want to accept all forms of payment so that we can capture the largest market possible.	**Could have**	5	**The forms of payment could have accepted.** Because accept all forms of payment should have need or not need for the system, it is quite difficult to develop because not all customers have a bank account. This is only a feature to improve the responsiveness and expand the quality of the system.

10	As a Customer I want to choose whether or not I am sent marketing information so that I do not get loads of junk mail.	**Could have**	2	**The customer could have choose whether I am sent marketing information or junk mail.** The problem of marketing email or spam is not a big one. Customers can filter or delete unimportant emails. However, in some cases spam will annoy them and they will give poor feedback on the quality of service of the system.

11	As a Warehouse Operative I want to check delivery addresses so that I can place orders with similar postcodes in the same delivery batch.	**Will not have**	3	**Warehouse Operative will not have to check delivery addresses to place orders with similar postcodes in the same delivery batch**. Because customers order products successfully, the delivery address has been saved in the system. If the customer purchases next time and they do not want to change their address, the order will be delivered with similar postcodes in the same delivery batch. This enhances the convenience and interaction of users when using the system.
12	As a Customer I want to be able to change my account details so that my most up to date details are recorded.	**Could have**	3	**The customer could have changed their account details and most up to date details are recorded**. Editing personal information is a small function of the system. It helps users update their information correctly such as name, date of birth, address, phone number. That is the basic information of customers when they interact with the system. Also, it helps employees of the company can easily support customers when they need it.
13	As an Order Handling Clerk I want to use the Web site to process telephone purchases so that I can stop using the paper-based system.	**Should have**	2	**The Order Handling Clerk should have to use the Web site to process telephone purchases so that I can stop using the paper-based system**. Today, almost anything can interact and be used by the mobile phone. It saves time, effort, and money than using paper-based. The secretary's phone only needs an internet connection to be able to process the system's transactions. She will easily manage her work better.
14	As a Customer I want to have belts gift wrapped and sent to an address other that than my own so that I don't have to bother wrapping and delivering presents.	**Could have**	4	**The customer's belt gift could have gift wrapped and sent to an address that than customer own**. This is an extended feature of the system, it will be package and send as required of the customer. Customers only need to payment an additional amount so they do not have to worry about wrapping and delivering gifts.
15	As a Student I want discounts on belts so that I can look cool at parties for minimal cost.	**Could have**	3	**The belts could have discounts so that students can look cool at parties for minimal cost**. This is a promotion for customers and it helps the product sell faster. The company needs a reasonable strategy to reduce the prices of products suitable for all ages. This helps to improve user interaction and product quality.
16	As a Customer I want to be sent an SMS message to remind me when my belts are going to be delivered so that I am in when they arrive.	**Will not have**	3	**The customer will not have received an SMS message to remind them when their belts are going to be delivered**. This feature is not necessary for the system because it will increase cost to complete feature and it can be troublesome for some fastidious customers.

17	As a Customer I want daily emails to let me know the status of my order because I get nervous when I don't know what is going on.	**Will not have**	4	**The customer will not have daily emails to let them know the status of their order.** This feature is not necessary for the system because when customers order successfully, the system will have a department in charge of inspection and safe delivery to customers. Customers will receive orders soon if the customer's address is correct. Besides, if customers want to know the status of the order, you can contact or look up the order information on the online post office. Therefore, it will reduce the hassle for some customers
18	As the Marketing Director I would like an offers or discount page so that we can inform our customers of the aforementioned.	**Must have**	3	**An offers or discount page must have informed customers of the aforementioned**. This is a very necessary feature for the system because customers are very interested in discounted products and they are willing to pay a sum of money to buy those products. Therefore, the system builds a page announcing discounted products for customers to easily interact, it will help the quality of the system increase.
19	As the Chief Accountant I want to the Web site to adhere to legislation regarding VAT so we are not hit with a hefty fine.	**Must have**	2	**The website must have to adhere to legislation regarding VAT.** Because compliance with standard principles is very important. The system works very well, customer interaction is very high but violating the legislation regarding rule will result in a penalty or the system may be banned. Therefore, the system must adhere to standard principles to improve quality and reputation with customers.
20	As a customer I want to be able to process returns via the Web site so that I do not have to phone up and answer all of those stupid questions before being put through to a human being.	**Should have**	4	**The customer should have process returns via the Website.** This feature will help customers to quickly respond to counselor when their products are defective and they can return the product through the website. But they will have to payment an additional amount for returning the product if it exceeds the specified time.

Figure 2. Requirements using MoSCoW Rules

3 Legbal, Social, Ethical and Professional Issues

3.1 Scenario 1: Information security

LLB sells shoe products and services online, they will need to collect sensitive information from customers including credit card or bank account information, customer's name, address, and phone number. Also, they will give customers the option to set up an online account, customers will set up a username and password. This will lead to the risk of hacked information and consumer information, which can be used to steal money from customers' accounts or continue identity fraud. If the LLB Company does not protect its data, it may be liable for information security breaches. Consumers may become discontented and cancel their accounts.

Legal aspects: To these issues, LLB and True Concepts personnel should comply with the Data Protection Act - a UK Act of Parliament. Especially, in the General Data Protection Regulation from the Data Protection Act, general principles related to personal data processing that LLB should be taken into consideration are as follow:

- *Fairly and lawfully processed:* This means the need to assign data controllers who are responsible for determining data protection within a company. Data should be handled in a manner that ensures appropriate personal data security, lawful and fair. (Data Protection, 1998)
- *Accuracy*: Personal data of customers must be accurate and updated when necessary. When personal data breach, or inaccurate information, the controller must notify the data subject of the breach, false information and rectify without delay. (Data Protection, 1998)

Social aspects: When a hacker steals a user's information, they can sell the information on underground websites or can impersonate the victim. This causes huge consequences and users can suffer a lot. LLB Company must protect its data, LLB may be liable for information security breaches. Consumers may become discontented and cancel their accounts. Therefore, LLB should comply with the Data Protection Act - a UK Act of Parliament. Especially, in the General Data Protection Regulation from the Data Protection Act as "Accurate and Secure" (Data Protection, 1998)

3.2   Scenario 2: Intellectual Property Violations

Intellectual property infringers often make it difficult for online businesses. Because these offenses are the result of poor legal awareness, while others have the knowledge but they still deliberately violate it. Some of the most common violations include:

- The logo has no origin: Logo is an important part of the company. Some businesses, due to budget constraints, have copied a used design or copied a logo from another company.
- Content steal: When businesses are limited in budget, they cannot afford to hire content writers, web designers who can compose good content, then post articles on their blogs, product descriptions and other content to use. They can steal content ideas or copy from other blogs which will to copyright infringement.

Legal aspects: According to (Designs and Patents Act, 1998) The solution to this scenario is that copyright will usually belong to the author of the work, unless there is a reverse agreement, (ie, in the service contract). However, if a work is produced from a partner as part of a job, then it usually belongs to the person/company that hired the individual. The only owner or exclusive licensee can legal proceedings against the infringement. So the company and business should base on the Copyright, Designs and Patents Act 1998.

Social aspects: Companies will have a lot of problems when publishing their website. Fake websites are created to deceive customers and cause them to reduce interaction with the main website. This will undoubtedly reduce the profits that governmental companies can receive, and reduce their reputation with customers. Besides, companies have to pay large sums of money to solve the problem. Therefore, companies should understand and understand the Copyright, Design

and Patents Act of 1998 to reduce risks that may occur in the future. (Designs and Patents Act, 1998)

3.3 Scenario 3: Customer Service

E-commerce involves a barrier between customers and the company. When customers need support because the product is damaged or want to ask about utility services, they cannot go to the store for support. Therefore, Customers must be based on online communication methods. Many businesses are committed to providing quality service and online support when customers contact or send feedback. (Petersen, 2019)

Ethical aspects: Some unethical e-commerce companies can refuse to answer emails and other customer contacts. Besides, some companies will continually delay until customers give up trying to solve their problems. Therefore, companies and businesses need to have plans and solutions for customer support services. If the problem is difficult to resolve immediately, the company needs to notify the customer or support about the problem they need assistance. Ecommerce companies should refer to ACS Code of Professional Conduct Professional Standards Board Australian Computer Society as follows:

- *"Not knowingly mislead a client or potential client as to the suitability of a product or service"* (ACS, 2014)
- *"Not attempt to enhance your own reputation at the expense of another person's reputation"* (ACS, 2014)

Professional aspects: In some cases, e-commerce companies will give rise to employees' professional qualifications. When employees are not experienced in supporting customers when they ask, they will feel timid and will have responsibility evasion. This type of behavior is not acceptable in professional behavior. As a result, the ASC has worked hard to improve and come up with standard principles to help trading companies apply and solve professional standards issues. Specifically, according to the ACS Code of Professional Conduct Professional Standards Board Australian Computer Society as follows:

- *" Reject, and will not make, any offer of bribery or inducement"* (ACS, 2014)
- *" Distinguish between your professional and personal opinions and advice"* (ACS, 2014)

3.4 Scenario 4: Traing staff

With E-commercial company or businesses that want to grow long-term and meet standards, the quality of service and staff training is very important. The LLB needs to have a plan to improve its employees to maintain professional standards to enhance the image of the industry, especially in the workplace. Example: Everyone has the right to equal treatment and respect. The LLB should provide and guide skills and advice for new employees. This helps them more knowledge and confidence to get the job done. The LLB should encourage employees to work hard to expand their knowledge and understanding of IT.

Ethical aspects: The ethical issues of the staff in LLB are very important. When they have enough knowledge and strictly adhere to the professional ethics of technologies, and professional standards, they will have the opportunity to develop themselves. The ASC has provided a set of

professional standards to help LLB handle ethical dilemmas. Therefore, when the LLB company following this value they will:

- *"Refrain from any conduct or action in your professional role which may tarnish the image of the profession or detract from the good name of the ACS"* (ACS, 2014)
- *"Endeavor to extend public knowledge and understanding of ICT"* (ACS, 2014)
- *"Co-operate in advancing ICT by communication with other professionals, students, and the public"* (ACS, 2014)
- *"Have pride in your profession, and protect and promote professionalism in ICT"* (ACS, 2014)

Professional aspects: The IT industry is in a period of rapid development and rapid change. The LLB should apply the ACS professional standards to provide opportunities for developing and achieving its standards and legislation. ACS is working hard to improve public confidence in the IT industry. Specifically, following this value LBB will:

- *"Take a calm, objective, informed, and knowledgeable stance on your professional work, complementing your enthusiasm and engagement in it."* (ACS, 2014)
- *"Confront attempts to limit diversity in the workplace, and ensure that opportunities for employment, advancement, remuneration, and other working conditions are based on the actual skills and performance of employees, free of stereotypes and prejudice."* (ACS, 2014)

3.5   The purpose of a professional body
3.5.1   Professional body
According to (BCS Code of Conduct, 2015) As a professional body, the British Computer Association (called BCS, the Chartered Institute for IT) is a professional organization for people working in IT, BCS has more than 65,000 members in over 100 countries. BCS is responsible for setting professional rules and standards for members in professional matters. These professional rules and standards are often higher than general rules. Besides, BCS is an international awarding organization and degree for IT professionals and IT users. BCS provides its members with materials and knowledge, opportunities to develop and keep up with industry expertise.

This Code of Conduct: It will set the professional standards required by the BCS as a condition that applies to members, regardless of their level, role, or performance of their contractual obligations. This is the governing behavior of members, not the business or ethical activities of any Agency. (BCS Code of Conduct, 2015)

Breaches The Code of Conduct: Members of BCS should be knowledgeable about any breach of this Code of Conduct, if there is a violation from other members, they are obliged to notify BCS. Besides, other non-BCS members will be taken notice if they violate these rules and will be reviewed according to the Institute's Disciplinary procedures. In some cases, any member who is convicted of a crime will have BCS receive information and provide a standard disclosure certificate or similar notice other than providing evidence of their crime within 28 days. (BCS Code of Conduct, 2015)

3.5.2 The four BCS Code of Conduct

Public Interest

Issues raised: Due care is using reasonable care to protect the interests of LLB. Due diligence is practicing the activities that maintain the due care effort. For example, due care is developing a formalized security structure containing a security policy, standards, guidelines, and procedures applicable to LLB. Due diligence is the continued application of this security structure onto the IT infrastructure of LLB.

Solution: Acting in the public interest may be governed by Legislation. Operational security is the ongoing maintenance of continued due. The LLB company wants to have knowledge and understanding of the laws and standards involved and they should comply with the requirements of the BCS Code of Conduct as follows: *"Have due regard for public health, privacy, security, and wellbeing of others and the environment"* (BCS Code of Conduct, 2015)

Professional Competence and Integrity

Issues: LLB wants to build human resources follow to standard so members are required to carry out professional development activities as a mandatory condition. Therefore, LLB staff can demonstrate that they have the necessary expertis.e. Through competence, qualifications, or experience, knowledge of the law, and professional ethics of employees can be recognized and take on specific roles in an issue for his experience.

Solution: According to (BCS Code of Conduct, 2015), *"Develop your professional knowledge, skills, and competence on a continuing basis, maintaining awareness of technological developments, procedures, and standards that are relevant to your field"*. Therefore Staff expertise is very important. LLB needs to have a plan for professional development activities, including expanding knowledge of IT careers, maintaining competencies, and complying with industry-laws of staff. LLB should refer to the following criteria.

Relevant Authority

Issues: In the process of cooperation and development, the LLB can encounter a conflict between full compliance and commitment with relevant Agency guidance and the enforcement of a professional judgment. For example, when LLB employee has any conflict or unable to complete any assigned task at their request or in a budget not sufficient to carry out other activities, the LLB should notify The Agency is immediately concerned.

Solution: According to (BCS Code of Conduct, 2015) "*carry out your professional responsibilities with due care and diligence in accordance with the Relevant Authority's requirements whilst exercising your professional judgment at all times"* and *"seek to avoid any situation that may give rise to a conflict of interest between you and your Relevant Authority*." Therefore, the LLB has any conflict they need to notify it fully and immediately to their relevant Authority to avoid unnecessary risks.

Duty to the profession

Issues: As a member of BCS you have a responsibility to *"share knowledge and understanding of IT and support the inclusion of every sector of society and encourage and support fellow members in their professional development*". (BCS Code of Conduct, 2015) An eCommerce business analyst is a good communicator when they can present diagrams of online data into valuable information for their company. They can help trainees understand and confidently present themselves to users and customer service agents. Through their experience, they can help the company to have quality human resources professionally.

Solution: E-commerce companies should comply with the terms of the BCS Code of Conduct but do not use it to reduce or deny terms of BCS. The BCS Code of Conduct helps companies have an overview and easily give development orientation follow to the standard of it as follows:

- *"Act with integrity and respect in your professional relationships with all members of BCS and with members of other professions with whom you work in a professional capacity."* (BCS Code of Conduct, 2015)
- *"Encourage and support fellow members in their professional development."* (BCS Code of Conduct, 2015)

4 References

ACS, 2014. *ACS Code of Professional Conduct Professional Standards Board Australian Computer Society,* s.l.: s.n.

BCS Code of Conduct, 2015. *BCS, THE CHARTERED INSTITUTE FOR IT.* s.l.:Trustee Board.

Carpenter, L., 2012. *nchannel.com.* [Online]
Available at: https://www.nchannel.com/blog/web-based-order-management-software-to-manageyour-business/
[Accessed 20 August 2012].

Chandana, 2019. *simplilearn.com.* [Online]
Available at: https://www.simplilearn.com/scrum-project-management-article [Accessed 4 Oct 2019].

Data Protection, 1998. *Data Protection Act.* The Stationery Office ed. UK: TSO.

Designs and Patents Act, 1998. *Copyright, Designs and Patents Act.* UK: UK.

digitalmarketinginstitute, 2020. *digitalmarketinginstitute.com.* [Online]
Available at: https://digitalmarketinginstitute.com/blog/what-are-the-benefits-of-e-commerce-to-yourbusiness
[Accessed 2020].

Fox, L., 2018. *objectiveit.com.* [Online]
Available at: https://objectiveit.com/blog/the-advantages-and-disadvantages-of-web-apps/
[Accessed 22 June 2018].

lvivity, 2018. *lvivity.com.* [Online]
Available at: https://lvivity.com/waterfall-model [Accessed 15 Mar 2018].

Nissenbaum, J. &., 1995. *Computers, Ethics and Social Values.* [Online]
Available at: http://computerethicsinstitute.org/ [Accessed 1995].

Petersen, L., 2019. *smallbusiness.chron.com.* [Online]
Available at: https://smallbusiness.chron.com/ethical-problems-ebusiness-62037.html
[Accessed 24 Jan 2019].

smartsheet, 2020. *smartsheet.com.* [Online]
Available at: https://www.smartsheet.com/agile-vs-scrum-vs-waterfall-vs-kanban [Accessed 2020].

Tester, 2019. *softwaretestingbooks.com.* [Online] Available
at: http://softwaretestingbooks.com/agile-model
[Accessed 1 July 2019].