ASSIGNMENT 01 FRONT SHEET

Qualification	**BTEC Level 5 HND Diploma in Computing**		
Unit number and title	Unit 09: Software Development Life Cycle		
Submission date	26/6/2022	**Date Received 1st submission**	
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Student declaration I certify that the assignment submission is entirely my own work and I fully understand the consequences of plagiarism. I understand that making a false declaration is a form of malpractice.			
		Student's signature	Ha

Grading grid

P1	P2	P3	P4	M1	M2	D1	D2

❒ **Summative Feedback:** **Feedback:**		❒ **Resubmission**
Grade:	**Assessor Signature:**	**Date:**
Internal Verifier's Comments:		
Signature & Date:		

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I. Introduction.

This report is an analysis of the SDLC model, risk assessment and management, and feasibility studies to apply to a company name Tune Source. It is a music retailer located in the south of California created by three entrepreneurs: John Margolis, Megan Taylor, and Phil Cooper. They started as an offline music store specializing in finding and collecting rare and high-quality vinyl, because of that, people always come here to find their favourite records. Besides a headquarter store, they also have a website for the customer to order and search the records. The annual sales of recording last year is $40 million with an annual growth of 3% to 5% each year, and they want to expand their business for more commission income. Their website had already been launched and was provided by a local Internet Service Provider in Los Angeles and the company IT

department, it seems that the website is working really well. They also want to open small kiosks to push up the sales. I'm going to explain everything important information below

II Task 1 – SDLC model

1. (P1) Describe the following SDLC models: waterfall, v-model, prototyping, agile and

spiral. Choose one that you think suitable for the project and explain why.

- **SDLC(Software Development Life Cycle) :**

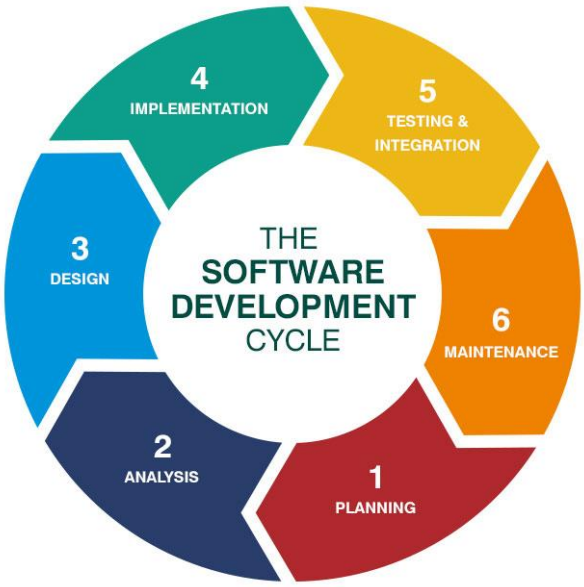

Figure 1 SDLC

SDLC or the Software Development Life Cycle is a process that produces software with the highest quality and lowest cost in the shortest time possible. SDLC provides a well-structured flow of phases that help an organization to quickly produce high-quality software which is well-tested and ready for production use. (ALTVATER, 2020).

it plays an extremely important and really necessary role in the business because, it helps our system to be operated closely, easily, with high efficiency, saving time, bring enormous benefits to the business, try to ask if, in a business without a reasonable production model, what will happen, of course the operation will not be sustainable and long-term, it will be very time consuming, confusing and underdeveloped.

How the Software Development Life Cycle Works

The Software Development Life Cycle simply outlines each task required to put together a software application. This helps to reduce waste and increase the efficiency of the development process. Monitoring also ensures the project stays on track, and continues to be a feasible investment for the company.

Many companies will subdivide these steps into smaller units. Planning might be broken into technology research, marketing research, and a cost-benefit analysis. Other steps can merge with each other. The Testing phase can run concurrently with the Development phase, since developers need to fix errors that occur during testing.

(phoenixnap, 2022)

- Waterfall:

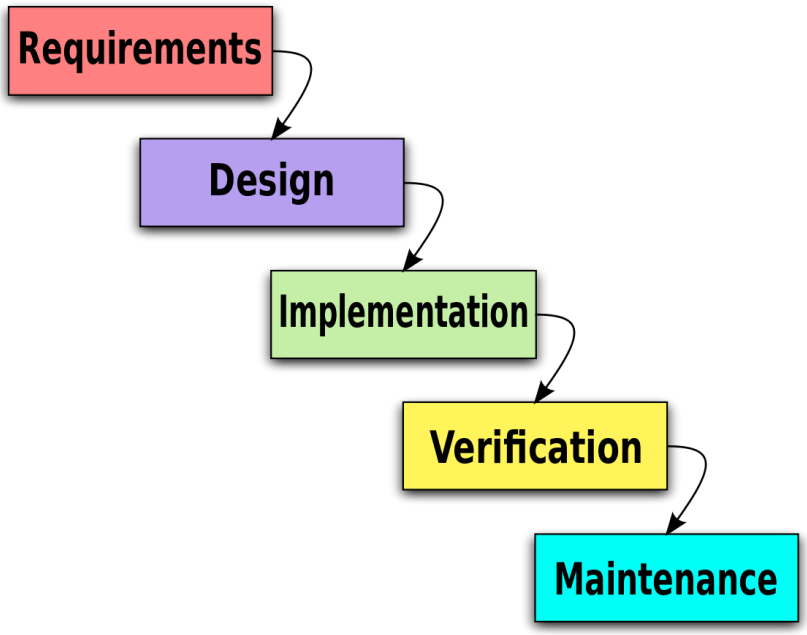

Figure 2 waterfall model

➢ **Define:**

The waterfall model is a classical model used in system development life cycle to create a system with a linear and sequential approach. It is termed as waterfall because the model develops systematically from one phase to another in a downward fashion. This model is divided into different phases and the output of one phase is used as the input of the next phase. Every phase has to be completed before the next phase starts and there is no overlapping of the phases. (economictimes, không ngày tháng)

➢ **Advantages:**

✓ Easy for usage and manage the process.

✓ All of requirements are set first so it makes it easier to do the project.

✓ Suitable for big projects when everything needs to be point out first.

➢ **Disvantages:**

✓ Requirements are first needed to be declared and completed before designing phase

✓ Expensive

✓ Hard to change the user's new accomodation since this model is a one-way development and deployment

✓ Unclear requirements could lead to failure.

(artoftesting, 2021)

- **V-Model:**

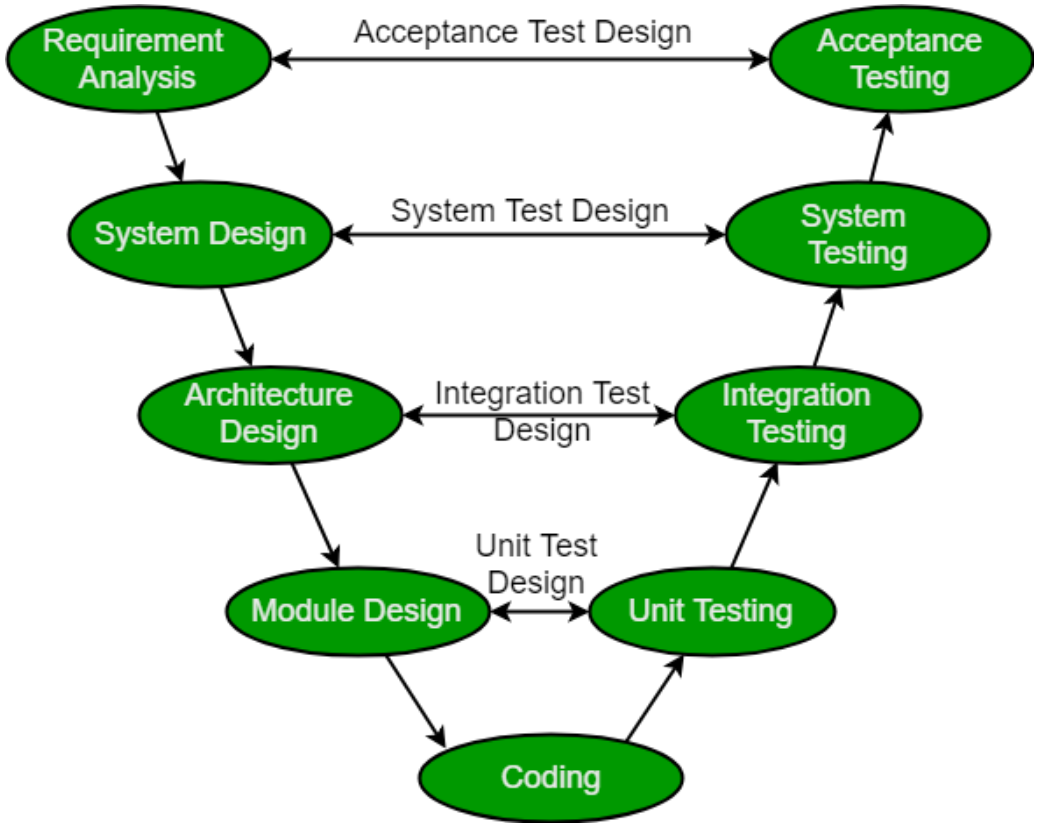

Figure 3 V_Model

➢ **Define:**

V Model is a highly disciplined SDLC model in which there is a testing phase parallel to each development phase. The V model is an extension of the waterfall model in which testing is done on each stage parallel with development in a sequential way. It is known as the Validation or Verification Model.

(Hamilton, 2022)

➢ **Advantage:**

✓ This is a highly-disciplined model and Phases are completed one at a time.

✓ Works well for smaller projects where requirements are very well understood.

✓ Simple and easy to understand and use.

✓ Easy to manage due to the rigidity of the model. Each phase has specific deliverables and a review process.

➢ **Disadvantage:**

- ✓ High risk and uncertainty.
- ✓ Not a good model for complex and object-oriented projects.
- ✓ Poor model for long and ongoing projects.
- ✓ Not suitable for the projects where requirements are at a moderate to high risk of changing.

(tutorialspoint, 2022)

- **Prototyping:**

Prototyping is used when the customers do not know the exact project requirements beforehand. In this model, a prototype of the end product is first developed, tested and refined as per customer feedback repeatedly till a final acceptable prototype is achieved which forms the basis for developing the final product. (geeksforgeeks, 2022)

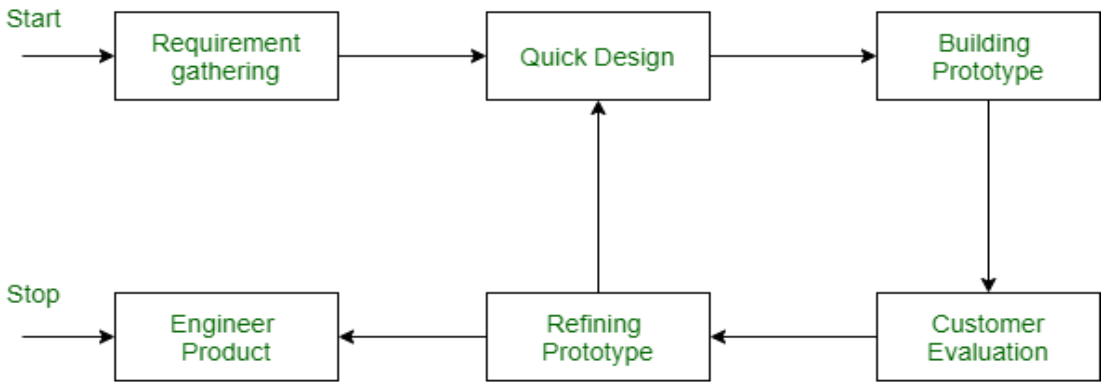

Figure - Prototype Model

Figure 4 Prototype Model

Advantage:

✓ Quick client feedback is received which speeds up the development process. Also, it helps the development team to understand the client's needs.

✓ Developed prototypes can be used later for any similar projects.

✓ Any missing functionality and any error can be detected early.

✓ It is useful when requirements are not clear from the client's end, even with limited requirements, the development team can start the development process.
(artoftesting, 2021)

Disadvantage:

✓ It is a time-consuming process or method as multiple prototypes might be needed until the client reaches the final requirements. The Client may not have an explicit idea about what they want.

✓ This method involves too much client interaction and involvement, which can be done only with a committed client.

✓ In the beginning, it is a bit difficult to predict the exact amount of time needed to reach the final product.

✓ While coding, developers do not have a broad perspective of what is coming, because of which they might use an underlying architecture that is not suitable for a final product.

(artoftesting, 2021)

- **Agile:**

Agile Software Development Life Cycle (SDLC) is the combination of both iterative and incremental process models. It focuses on process adaptability and customer satisfaction by rapid delivery of working software product. Agile SDLC breaks down the product into small incremental builds. These builds are provided into iterations.
(javatpoint, 2022)

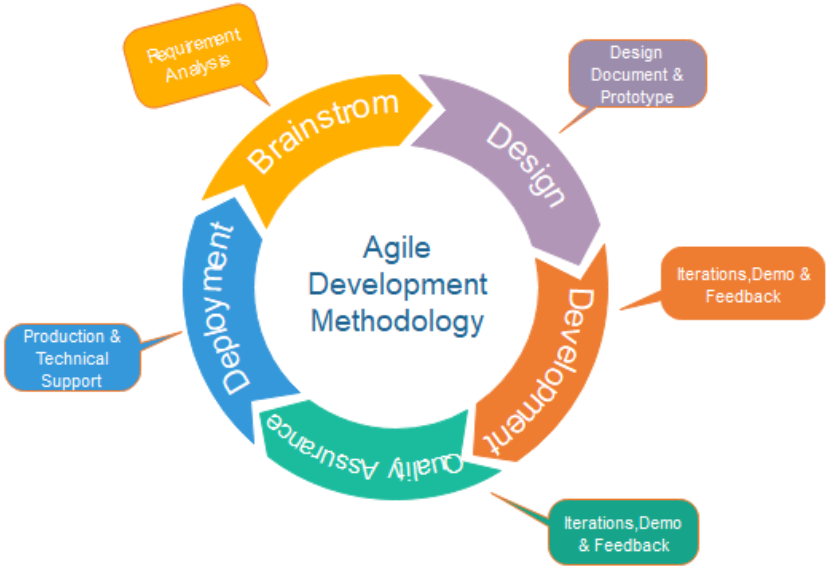

Fig. Agile Model

Figure 5 Agile_Model

➢ **Advantage:**

✓ Project is divided into short and transparent iterations.

✓ It has a flexible change process.

✓ It minimizes the risk of software development.

✓ Quick release of the first product version.

✓ The correctness of functional requirement is implemented into the development process.

✓ Customer can see the result and understand whether he/she is satisfied with it or not.

(javatpoint, 2022)

➢ **Disadvantage:**

✓ The development team should be highly professional and client-oriented.

✓ New requirement may be a conflict with the existing architecture.

✓ With further correction and change, there may be chances that the project will cross the expected time.

✓ There may be difficult to estimate the final coast of the project due to constant iteration.

(javatpoint, 2022)

- **Sprial:**

The spiral model is a systems development lifecycle (SDLC) method used for risk management that combines the iterative development process model with elements of the Waterfall model. The spiral model is used by software engineers and is favored for large, expensive and complicated projects.
(contribution, 2022)

Each spiral loop is referred to as a step of the software development process. Based on the project risks, the exact number of steps required to produce the product can be determined by the project manager. As the project manager systematically calculates the number of stages, the project manager has an significant role to play in designing a product using a spiral model

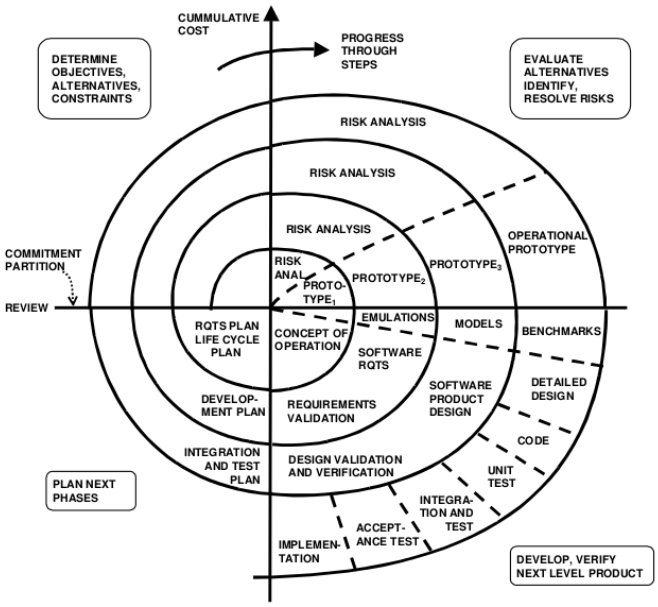

Figure 6 Sprial_Model

Advantages

- ✓ Changing requirements can beaccommodated.
- ✓ Allows extensive use ofprototypes.
- ✓ Requirements can be captured more accurately.
- ✓ Users see the system early.

(tutorialspoint, 2022)

Disvantages

- ✓ Management is more complex.
- ✓ End of the project may not be known early.
- ✓ Not suitable for small or low risk projects and could be expensive for small projects.
- ✓ Process is complex
- ✓ Spiral may go onindefinitely.
- ✓ Large number of intermediate stages requires excessive documentation.

(tutorialspoint, 2022)

Choose one that you think suitable for the project and explain why

- ✓ I think Agile software development is best methodology for tune source because It has

- ✓ many reasons to be suitable for Tune Source:
- ✓ Lower Cost
- ✓ Enables clients to be happier with the end product by making improvements and involving clients with development decisions throughout the process.
- ✓ Encourages open communication among team members, and clients.

- ✓ Agile software development is suitable for Tune Source because It can be used with any type of project, but it needs more engagement from the customer and to be interactive. Also, we can use it when the customer needs to have some functional requirements ready in less than three weeks and the requirements are not clear enough. This will enable a more valuable and workable piece of software early which also increases customer satisfaction. Provides teams with a competitive advantage by catching defects and making changes throughout the development process, instead of at the end. It speeds up time spent on evaluations since each evaluation is only a small part of the whole project. Ensures changes can be made quicker and throughout the development process by having consistent evaluations to assess the product with the expected outcomes requested. It keeps each project transparent by holding regular consistent meetings with customers and systems that allow everyone involved to access project data and progress. It decreases the time required to avail some system features. In conclusion, It is suitable for the project.

(M1) Discuss the suitability of each of the SDLC models for the project. For each

model, specify whether it is most, moderately or least suitable.

1. Use cases for the Waterfall SDLC model:

- ✓ The requirements are precisely documented.
- ✓ Product definition is stable.
- ✓ The technologies stack is predefined, which makes it not dynamic.
- ✓ No ambiguous requirements.
- ✓ The project is short.

Applied to Tune source:
according to tune source's project. the waterfall model doesn't fit at all. because tune source is not a very small project, moreover the waterfall model runs completely in a straight line and completely certain, it is quite limited in checking the process as well as the progress besides, It is also quite expensive and time consuming. in tune source. Music downloads can easily change according to trends, markets as well as user requirements, which means it will not be fixed. Therefore, it is completely inappropriate to use the waterfall model for this project.

2. Use cases for the Spiral model.

- ✓ A Spiral model in software engineering is used when project is large
- ✓ When releases are required to be frequent, spiral methodology is used
- ✓ When creation of a prototype is applicable
- ✓ When risk and costs evaluation is important
- ✓ Spiral methodology is useful for medium to high-risk projects.

(Martin, 2022)

Applied to Tune Source:
Application in project Regulatory source: Spiral model is quite suitable for projects because It is used in large applications and the system is built-in in small stages or segments. This will avoid the end product being demanded by the consumer but it is not really a suitable source of wealth. The Tune Source project is a large-scale project, so it needs a model that can control risk in every stage and continuously reduce risk. Setting the goal will ensure that the

quality of the product matches all the customer requirements allowing the product quality to be the same as required.

3. Use cases for the V_Model:

- ✓ For the projects where accurate product testing is required
- ✓ For the small and mid-sized projects, where requirements are strictly predefined
- ✓ The engineers of the required qualification, especially testers, are within easy reach

Applied to tune source:
It can be said, V_Model is a model that can be applied to many projects, because it is highly disciplined, moreover, they are tested in parallel for each stage of development, quite simple, so it is not nothing to worry about. However, for the tune source project, it doesn't seem quite suitable, because tune source is a big project, so all stages are quite complicated and always customer-oriented. Therefore, the project can change continuously to suit the needs of customers, increasing labor productivity as well as the long-term development of the system.

2. (P2) Identify some risks and discuss an approach to manage them.

- ➢ **Define:**

Risk management is the process of identifying, assessing and controlling financial, legal, strategic and security risks to an organization's capital and earnings. These threats, or risks, could stem from a wide variety of sources, including financial uncertainty, legal liabilities, strategic management errors, accidents and natural disasters.

Risk identification is the process of identifying and assessing threats to an organization, its operations and its workforce. For example, risk identification may include assessing IT security threats such as malware and ransomware, accidents, natural disasters and other potentially harmful events that could disrupt business operations.
(ibm, 2022)

- ➢ **Manage of risk process:**

At the broadest level, risk management is a system of people, processes and technology that enables an organization to establish objectives in line with values and risks.

A successful risk assessment program must meet legal, contractual, internal, social and ethical goals, as well as monitor new technology-related regulations. By focusing attention on risk and committing the necessary resources to control and mitigate risk, a business will protect itself from uncertainty, reduce costs and increase the likelihood of business continuity and success.

Three important steps of the risk management process are risk identification, risk analysis and assessment, and risk mitigation and monitoring.

(ibm, 2022)

Apply risk to Tune Source:

Risk description	Category(type risk)	probability	Impact	solution
Today, the industrialized market is increasingly high and competitive, all thanks to the impact of technology. Technology can change at any time to attract consumers, if the website remains in the old technology style and does not modernize, the answer will be forever not up to date. customers will decrease.	Technology risk	high	high	sales site improvements, like speed, storage, scaling, Some of those systems will help satisfy customers and it's part of the business process
The import and sale of technology products, there are many dangers. it's pretty quick to break if we leave it for a long time and don't use it for a long time, this affects the quality and sound of the product.	Technical and architectural	High	high	Establish a sound business plan. avoid to overload input that will cause heavy losses to the business side. When buying products, users must be instructed on how to use and store them
We can see that their product sales are estimated to be quite high, but nothing can be certain that the sales can be exactly as estimated (hard and rare music is not used yet). full) so it will most likely affect the quality of the product as well as the image of the company.	Budget risk	low	Low	Survey the cost from the customer, and give the appropriate cost
Downloaded music may not be copyrighted and of poor quality.	Quality	low	low	Verify copyright and sound quality
the song may not have been provided with copyright, may be pirated music, loss of trust in customers that violates the law causes great damage.	Resource	low	high	request to provide copyright and verify the product before transmitting it back to the customer
setting up a customer's subscription account that allows free monthly downloads is a great business model to increase revenue, but this has to do with	Technology	high	High	requires high user security to prevent bad guys from entering, allowing

security, customer accounts can be stolen to if security is loose				users to store all purchased songs in memory.
Too many people download music at the same time at the kiosk or buy or experience the sample music preview page, which will make the connection speed slow, causing congestion and loss of time. make customers wait a long time. working efficiency is not high	Times risk	low	low	add a router, the technology department ensures fast transmission speed and customer satisfaction
The song downloads may fail if the website has problems.	technology	medium	medium	Always check the website as well as the security, make sure everything is stable before delivering to the customer
The marketing market is increasingly trending and competitive, so if only using old technology and not cutting-edge technology, it will be very difficult for businesses to develop and may reduce revenue.	Technology	High	High	improve the business model by modernizing technology, adding some functions: incentives, gifts, notifying customers of new songs or music release schedules, so that users can easily catch up with them. trust and bring high efficiency to the business. significant increase in revenue.
The company's security system can be attacked by bad guys and steal data.	high	low	high	create separate email login accounts for company members, divided by department, the system must store each employee's data as well as their access. the system must be

				upgraded security, and operate strictly

Table 1 Risks

II. Task 2 – Feasibility study.

1. (P3) Discuss the purpose of conducting a feasibility study for the project.

➢ **Define:**

A feasibility study is a process of determining a project or system, whether a potential idea is feasible, such as ensuring a project is technically and legally feasible and economically feasible. A feasibility study aims to systematically and objectively identify the strengths and weaknesses of an existing business or proposed venture. (simplilearn, 2022)

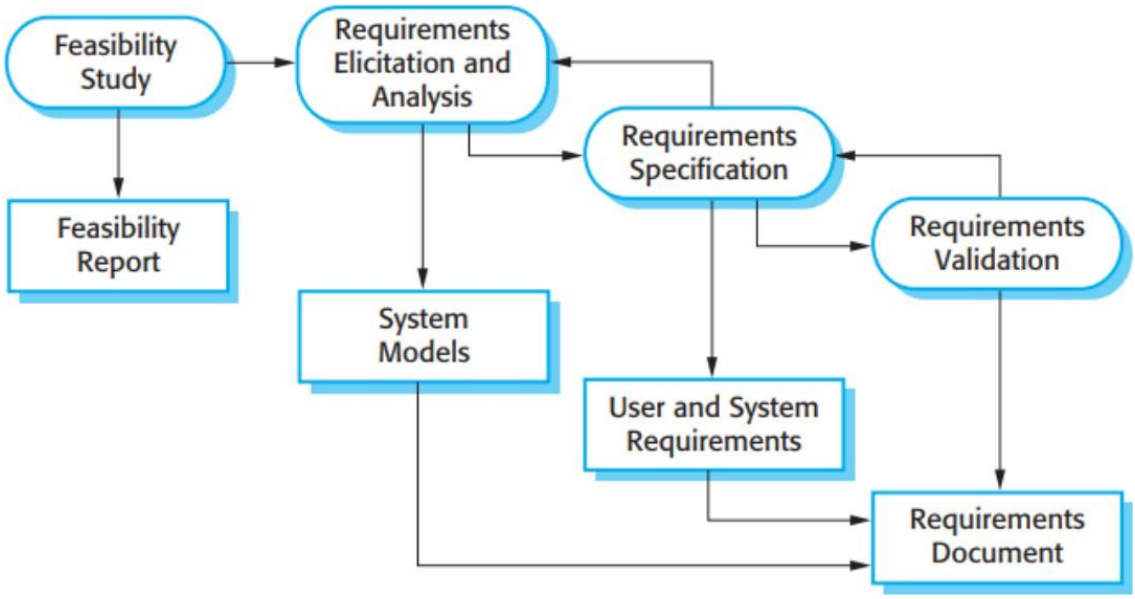

Figure 7 feasibility

➢ **Advantage:**

✓ This research, created as the first phase in the software development life cycle, includes all of the analytic components that aid in thoroughly examining the system requirements.

✓ Aids in identifying the risk variables involved in the system development and deployment.

✓ The feasibility study aids in risk analysis planning.

✓ A feasibility study aids in the creation of a cost/benefit analysis, which aids in the effective operation of the organization and system.

(freestudy, 2020)

- **Types:**

✓ **Technical Feasibility**

This assessment focuses on the technical resources available to the organization. It helps organizations determine whether the technical resources meet capacity and whether the technical team is capable of converting the ideas into working systems.
(simplilearn, 2022)

✓ **Economic Feasibility**

This assessment typically involves a cost/ benefits analysis of the project, helping organizations determine the viability, cost, and benefits associated with a project before financial resources are allocated. It also serves as an independent project assessment and enhances project credibility—helping decision-makers determine the positive economic benefits to the organization that the proposed project will provide.

(simplilearn, 2022)

- **Operational Feasibility**

Organizational feasibility analysis is conducted to determine whether a proposed business has sufficient management expertise, organizational competence, and resources to successfully launch its business.

(definition, 2020)

Importance of Feasibility Study:

The importance of a feasibility study is based on organizational desire to "get it right" before committing resources, time, or budget. A feasibility study might uncover new ideas that could completely change a project's scope. It's best to make these determinations in advance, rather than to jump in and to learn that the project won't work. Conducting a feasibility study is always beneficial to the project as it gives you and other stakeholders a clear picture of the proposed project.
(simplilearn, 2022)

Benefits of Feasibility Study:

Preparing a project's feasibility study is an important step that may assist project managers in making informed decisions about whether or not to spend time and money on the endeavor. Feasibility studies may also help a company's management avoid taking on a tricky business endeavor by providing them with critical information.

An additional advantage of doing a feasibility study is that it aids in the creation of new ventures by providing information on factors such as how a company will work, what difficulties it could face, who its competitors are, and how much and where it will get its funding from. These marketing methods are the goal of feasibility studies, which try to persuade financiers and banks whether putting money into a certain company venture makes sense.

(simplilearn, 2022)

- **Purpose:**

A feasibility study is designed to answer whether or not a proposed project or idea should go forward by determining whether the project or plan is practical and doable. A feasibility study can identify the strengths and weaknesses of the proposed plan. (investopedia, 2022)

Apply to Turn Source:

From the above purposes of the feasibility study, I will apply it to my project which is the Tune Source project. From the Tune Source project, I will outline and analyze the feasibility of the Tune Source project through the types of feasibility. The types of feasibility I mentioned such as Technical Feasibility, Economic Feasibility, and Operational Feasibility are all feasible for Project Tune Source. And make a guide to let the boss see if he will continue this project. According to the analysis of Tune Source, this will continue because it will not cost too much because Tune Source does not require costs, secondly, there are many key points about the business demand of Tune Source, which is to increase revenue. sales . And Tune Source is in dire need of creating this product as quickly as possible to bring it to market so as not to lose money.

2. (P4) Discuss how the three feasibility criteria (technical, economic, organisational) are

applied to the project. Discuss whether the project is feasible.

❖ Technical Feasibility

Evaluate the benefits and risk if implementing project base on some criteria:
+ Familiarity with Application
+ Familiarity with Technology
+ The project size
+ Compatibility with other syste

Familiar with the application:
Because the website is always customer-oriented, the use will certainly not be too difficult. and because creating a new website also has the same functions as the old website. Therefore, most applications are quite familiar to customers, so they do not cause difficulties for users, multi-functional websites allow users to buy, sell and connect to satisfy users' requirements.

Familiar with Technology:
This website was originally developed by an Internet consulting company and hosted by a famous Local Internet Service Provider (ISP) in Los Angeles, and of course, the website is all created by the same people. professional IT staff, so there is nothing to worry about because of the level of risk. most of the apps created are very easy to use, however, to get used to them properly to be able to communicate with customers, employees will have to go through a training process.

however, there are still many limited parts, if possible. The system should expand the website with 4.0 technology, more powerful functions.

Project size:
Although the store system is quite widely opened in the market, the scale of the project is not really large, it is necessary to promote the team as well as the product.

Compatibility with other systems:
compatibility with other systems is quite high, linking with many other systems. suppose: the system can link with the bank, so the user can freely choose many suitable payment methods.

❖ Economic Feasibility

Explain about the benefit if we invest the system (compare cost and benefit as tutor guide).

Conservative estimates of tangible value to the company include the following:

- Benefit:

Benefit	**2020**	**2021**	**2022**	**Total**
Sale form individual music dowload	$600.000	$989.000	$800.000	
Sale from customer subscriptions	$800.000	$785.000	$1.500.000	
in additional in-store or website CD sales	$200.000	$549.000	$600.000	
sales from music download gift cards	$150.000	$300.000	$459.000	
revenue revenue = revenue without software - revenue from available software	(1.750.000– 1.250.000)= $500.000	(2.623.000- 1.750.000) = $873.000	(3.359.000- 2.623.000)= $736.000	$2.109.000

Table 2 Benefit

- **Develop cost**

Development cost	**2020**	**2021**	**2022**	**Total**
Development training	$5.000	0	0	
Software	$20.000	0	0	
Hardware	$20.000	0	0	
Equipment Vendor installation	$30.000 $3.000	0 0	0	
royalty fee	$25.000	0	0	
Total	$103.000	0	0	$103.000

Table 3 Develop Cost

- **Operational cost**

Operator cost	**2020**	**2021**	**2022**	**Total**
Software upgrades	$3.000	$3.000	$3.000	
Software licensing fees	$1.000	$1.000	$1.000	
Hardware upgrades	$2.500	$2.500	$2.500	
Communications Charges	$1.500	$1.500	$1.500	

Total Operational costs	$8.000	$8.000	$8.000	$24.000

Table 4 Operational Cost

According to the above profit spreadsheet, we can clearly see the company's growth every year, according to the comparison, the total annual revenue in music sales has increased sharply, the strongest is in 2022 reaching the total revenue. revenue is $3,359,000, which measures the company's growth rate is very high.

Explain about the benefit if we invest the system (compare cost and benefit as tutor guide).
Conservative estimates of tangible value to the company include the following:

Total Benefit = Benefit-(developCost+ OperatorCost)
= $2.109.000 – ($103.000 + $24.000)
= $1.982.000

❖ **Organisational Feasibility**

because to enhance the brand as well as attract customers, and to prevent competition from other brands. We will focus on the website. In the coming future, we will focus on technology, will upgrade the website, bring all customers to know many new features, applications and products of the store. The key is to attract customers.

We can also see that the business model in the project is very feasible and the business people have high hopes for this project, they believe that Tune Source will increase sales by allowing existing customers to buy music. digital. especially and by reaching new customers interested in our unique archive of rare and hard-to-find music. They hope to gain a new revenue stream from customer subscriptions to Tune Source's download services. They do expect bundle sales to increase, as customers who have downloaded one or two tracks of a CD decide to purchase the entire CD in-store or through our website. Tune Source also expects a new revenue stream from the sale of music download gift cards.

For users, buying and selling music can be bought in many places, so we need to quickly make and update new, unique songs to be able to achieve the highest revenue.

Discuss whether the project is feasible.

❖ **Technical feasibility**

Today technology is more and more developed and modern. they are significantly improved, some websites have been created by professional programmers, all of them can be created from 4.0 technology-based programming languages such as java, c# , PHP,..they are full of features and extremely

responsive. so for the tune sorce project, it's not difficult to develop a website to meet user requirements.

❖ **Economically feasibility**

due to the Tunne Source Company had an annual revenue of $40 million last year with an annual growth rate of about 3%–5% per year. showed a small increase in revenue. Therefore, this is a company with a very stable customer base and will grow stronger in the future. The economic feasibility of this project is quite feasible.

❖ **Organizational feasibility**

because this is a business that is not too big but not too small. so the assignment of tasks in an organization will be very clear and not too complicated. The leader will set the task as well as need to be responsible for the project's criteria. At the same time, it is necessary to bear the responsibility if the task occurs any errors, so the feasibility of the organization is completely possible.

Discuss alternative technical solutions using the alternative matrix (using alternative

matrix and have some paragraphs to compare solutions).

		Alternative 1: Solution 1 – Custom Application using java		Alternative 1: Solution 2 – Custom Application using C#		Alternative 1: Solution 3 – Packaged Application using C	
Evaluation Criterial	**Importance(weigh score)**	**Score(1-5)**	**Weighted scored**	**Scored(1-5)**	**Weighted scored**	**Score**	**Weighted scored**
Technical issue							
Supported to multiple platform	**10**	**3.5**	**50**	**4**	**45**	**3**	**30**
Security	**20**	**4**	**80**	**3**	**60**	**2.5**	**50**
Clear and friendly interface	**10**	**5**	**45**	**3.5**	**40**	**4.5**	**45**
Integrated with other system	**10**	**4.5**	**40**	**4**	**40**	**3**	**30**
Economic issue							
Cost for developlement	**10**	**4**	**50**	**3**	**35**	**4**	**35**

Profit gained	**20**	**4**	**80**	**3.5**	**75**	**4**	**80**
Organization al issue							
User satisfaction	**10**	**5**	**40**	**4**	**55**	**4**	**35**
Interface customization	**10**	**4.5**	**45**	**5**	**40**	**3.5**	**50**
Total	**100**		**430**		**390**		**355**

Table 5 Matrix

I will completely choose java for Tune Source project because java has many outstanding features in this project such as fast page loading speed, high resolution, Clear and friendly interface so good, customizability compatible with the latest technologies in the world, high security as well as compatible with many other operating systems and importantly, it is simple and independent. it can automatically generate classes according to user requirements. In short, it has diverse features that save time and effort.

Conclusion

After working with tune sorce, I feel very comfortable and wonderful, because I not only know many types of models in business such as: model, v-model,... but also know how analyze, study the feasibility as well as measure the development level of the business, accurately identify the problem that the system has to offer a reasonable solution to help the business be sustainable and develop in the long run. .

At first it was difficult for me to recognize SDLC, because it was quite abstract and confusing. but after practicing and doing exercises, I have somewhat understood and realized the crux of the problem. So, after finishing this report I feel really comfortable. It doesn't look very good, but I'm glad I finished it.

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