Higher Nationals in Computing

UNIT 5

Software Development Life-cycles

ASSIGNMENT

No.2

Learner's name: Hoàng Khánh Sơn

Assessor name: Ngo Quoc Anh

Class: GCS0704B

Learner's ID: GCS18793

Subject's ID: 1631

Assignment due: December 2019

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ASSIGNMENT 2 BRIEF

Qualification	BTEC Level 5 HND Diploma in Computing
Unit number	Unit 9: Software Development Life Cycle
Assignment title	Undertake a Software Development Lifecycle
Academic Year	2018 – 2019
Unit Tutor	Ngô Quốc Anh
Issue date	December 27th, 2019	**Submission date**	
IV name and date	Hoang Khanh Son

Submission Format:
Format: The submission is in the form of 1 document
You must use font *Calibri size 12, set number of the pages and use multiple line spacing at 1.3. Margins must be: left: 1.25 cm; right: 1 cm; top: 1 cm and bottom: 1 cm.* The reference follows Harvard referencing system.
Submission Students are compulsory to submit the assignment in due date and in a way requested by the Tutors. The form of submission will be a soft copy posted on http://cms.greenwich.edu.vn/
Note: The Assignment *must* be your own work, and not copied by or from another student or from books etc. If you use ideas, quotes or data (such as diagrams) from books, journals or other sources, you must reference your sources, using the Harvard style. Make sure that you know how to reference properly, and that understand the guidelines on plagiarism. *If you do not, you definitely get failed*

Unit Learning Outcomes:
LO3 Undertake a software development lifecycle
LO4 Discuss the suitability of software behavioural design techniques

Assignment Brief and Guidance:

Task1

Now your team had been accepted to create the Software to Tune Source. As a member of a development team, your task now is to produce the requirements for Tune Source. You also need to specify the technique(s) or processes you used in order to get these requirements.

Task 2

Based on the requirements which established in Task1 provide the following diagrams: Use Case, ERD, DFD… which can help to identify more clearly about the system you are going to implement.

Task 3

Based on your understanding about the Tune Source's requirements in Task1 and Task 2, show how the requirement can be addressed. Your method could include software behavioural specification methods and reliability and effectiveness of software.

Task 4

Your client want to improve the software quality. Create a report which shows how software quality could be improved from tracing requirements and programme design.

Learning Outcomes and Assessment Criteria		
Pass	**Merit**	**Distinction**
LO3 Undertake a software development lifecycle		
P5 Undertake a software investigation to meet a business need. **P6** Use appropriate software analysis tools/techniques to carry out a software investigation and create supporting documentation.	**M3** Analyse how software requirements can be traced throughout the software lifecycle. **M4** Discuss two approaches to improving software quality.	**D3** Critically evaluate how **the** use of the function design paradigm in the software development lifecycle can improve software quality.
LO4 Discuss the suitability of software behavioural design techniques		**D4** Present justifications of how data driven software can improve the reliability and effectiveness of software.
P7 Explain how user and software requirements have been addressed.	**M5** Suggest two software behavioural specification methods and illustrate their use with an example. **M6** Differentiate between a finite state machine (FSM) and an extended-FSM, providing an application for both.	

ASSIGNMENT 2 FRONT SHEET

Qualification	BTEC Level 5 HND Diploma in Computing		
Unit number and title	Unit 9: Software Development Life Cycle		
Submission date	December 27th,2019	Date Received 1st submission	
Re-submission Date		Date Received 2nd submission	
Student Name	Hoang Khanh Son	Student ID	GCS18793
Class	GCS0704B	Assessor name	Ngo Quoc Anh

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	

Grading grid

P5	P6	P7	M3	M4	M5	M6	D3	D4

✿ Summative Feedback:		✿ Resubmission Feedback:	
Grade:	**Assessor Signature:**		**Date:**
Signature & Date:			

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Task 1: Requirement

In this task, we will illustrate the requirements that the software needs to perform the sales function and allow the music to be registered.

The software will be able to provide customers with services including:

1. Register:

Customers who do not have an account can sign up to use some services.

2. Login:

Sign in to use service for User if you already have an account

3. Search music:

Search function can find music products based on popular letters or the name of the music is also the name of artist.

4. Play sample music:

Customers can search and select to play the sample of music.

User can search and select to play the music and buy selected music.

5. Pay to buy music in several ways:

Buy by paying for per product.

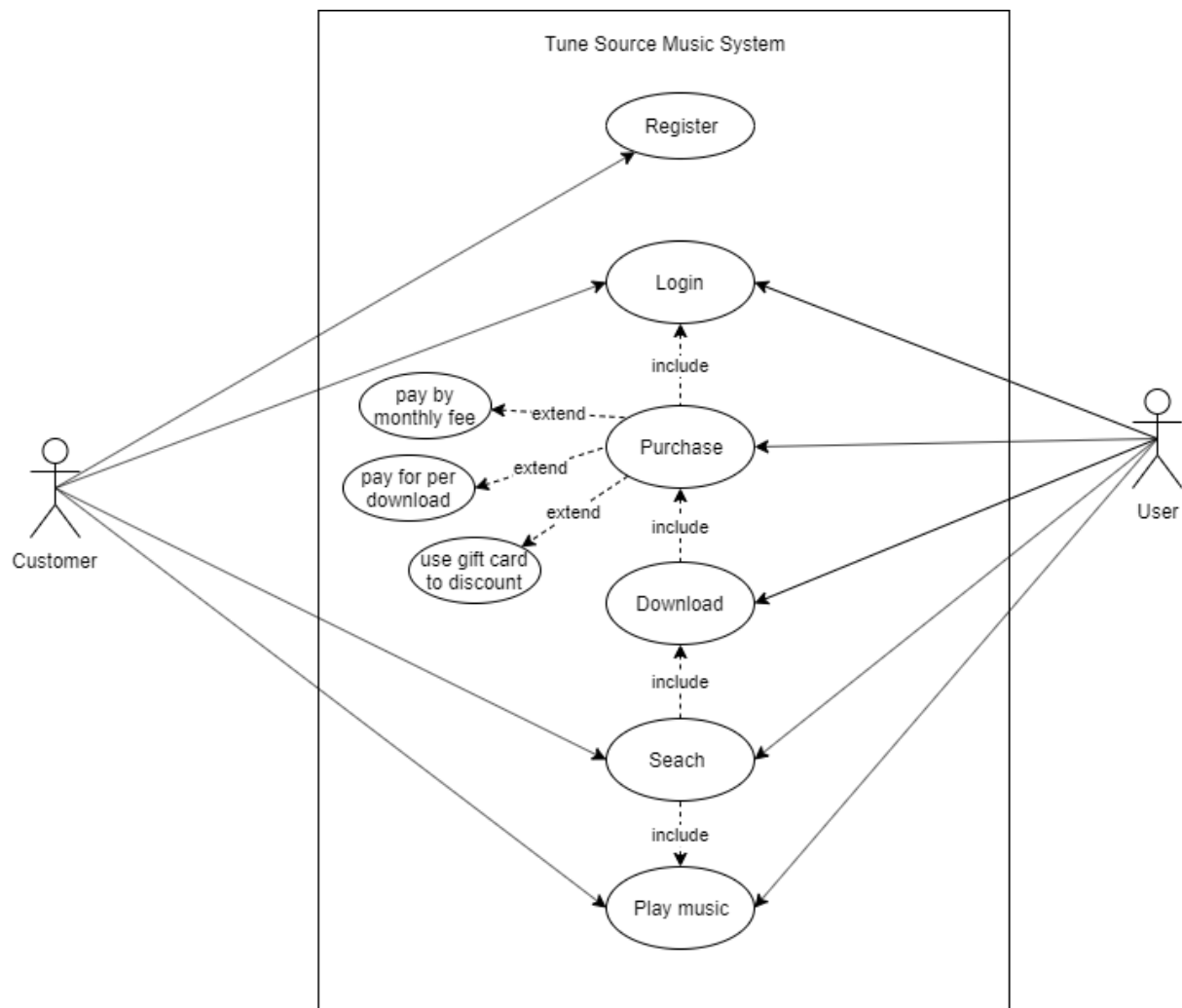Purchase a monthly membership package with unlimited music download for one month.

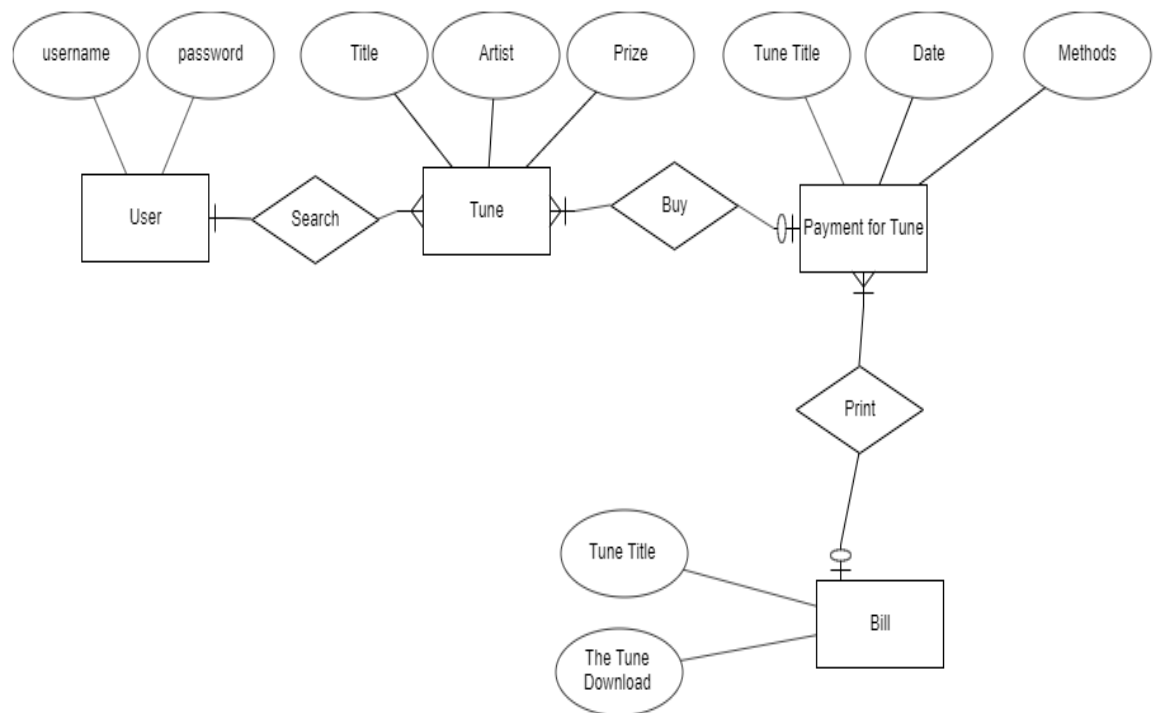Buy music as a gift for another User.

6. Download music:

Give User the ability to download music from the website after payment.
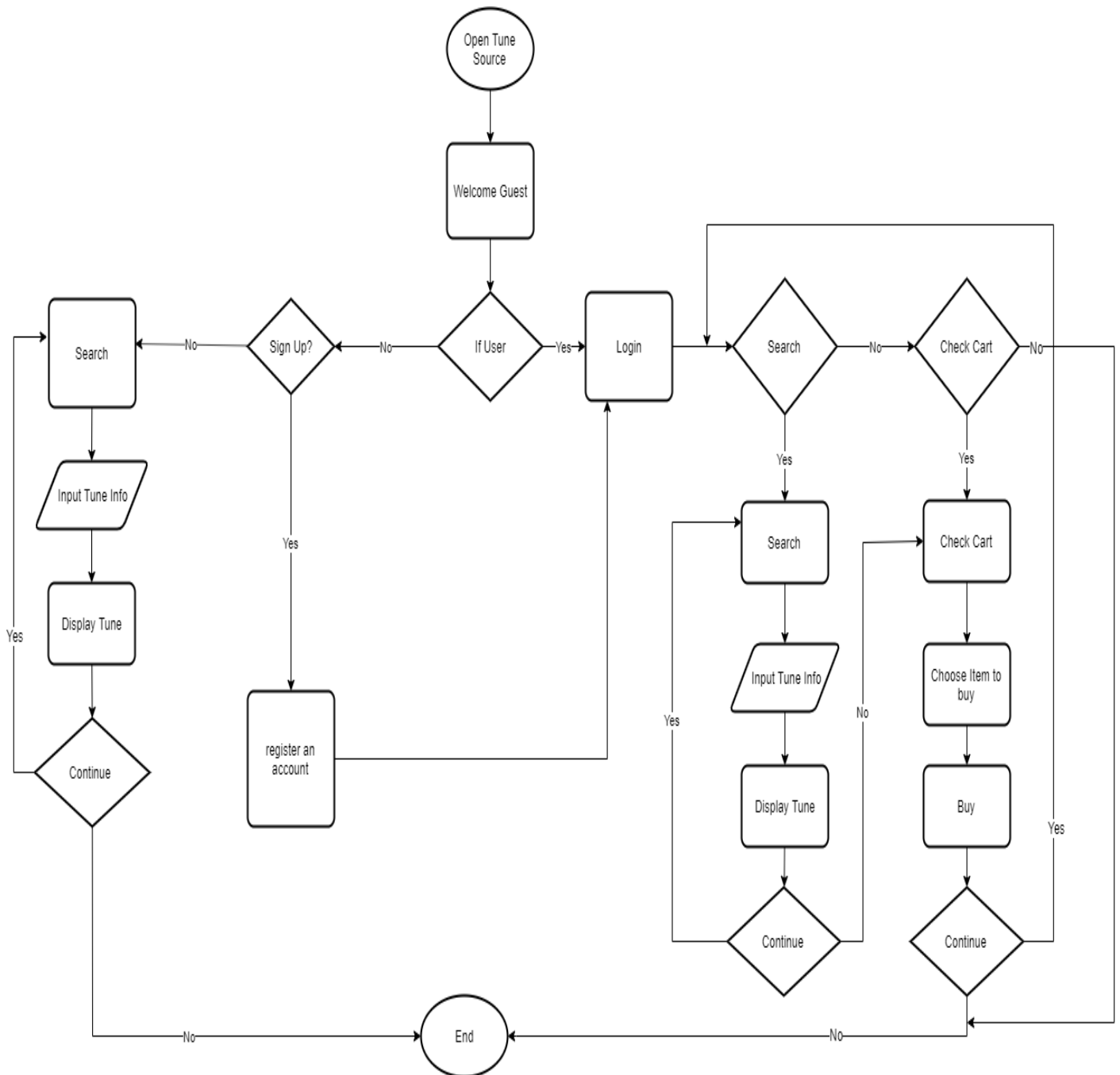
Task 2: Implement

1. Use Case Diagram

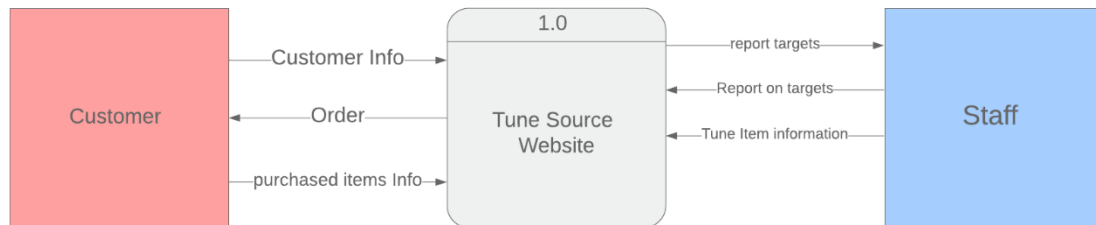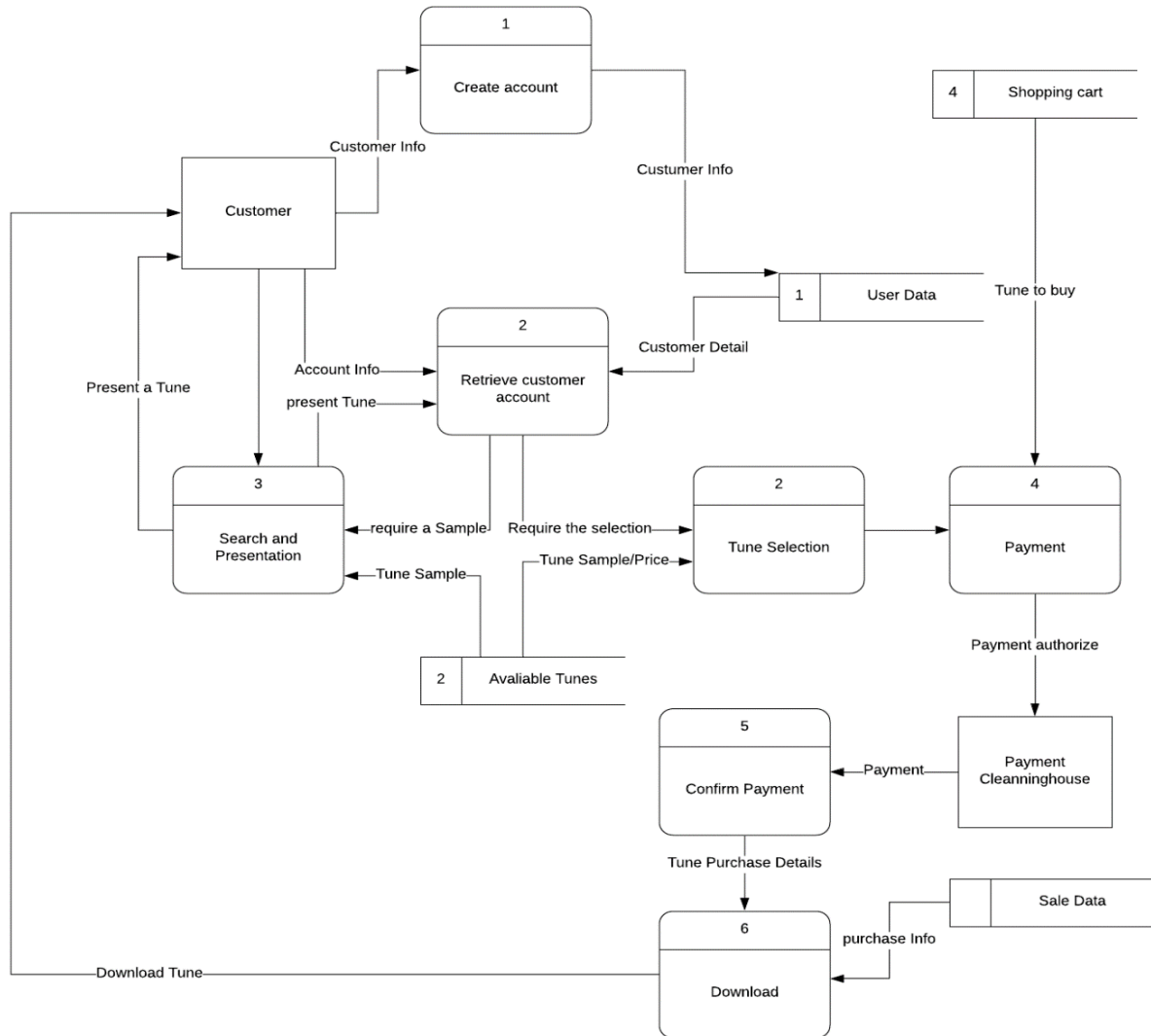## 2. Entity Relationship Diagram

3. Flowchart

4. Data Flow Diagram

4.1. Context Diagram

4.2.   Data Flow Diagram Level 0

Task 3: Mode of operation

For Tune Source Company to have a full understanding of the flow of software programs. Step by step instructions will be to show how the software works, on the other hand, the flow of the program.

Step 1: The website requires customers to have an account to use the Tune Source website service. So that, there are two ways in this case:

First, assume the customer has owned the Tune Source website account. So, they can just log in to the site and use second request.

Second, it is the case that the customer does not yet own any account. So, it requires them to create one, this is time for customers to use the site's registration function. Once the account creation is completed, it will be saved in the account database of Tune Source account and automatically login to the site.

Step 2: The next task is to find music. The website will allow you to enter the name of the item you are looking for such as music name, artist name, author name to find the product that the User wants.

There are also two cases:

In the first case, you are an unregistered guest account, the site allows you to search for the name of the music and enter it in the search bar. The site will reply with a playlist that meets the guest account's search input.

In the second case, you are the User account.

- Users want to search for a name Users enter the name of the music and enter it into the search bar. The site will respond to Him with a playlist that meets User's search input.

- Or, Users want to search for products that they have added to the shopping cart to buy music or have paid to download music to the device.

Step 3: After finding the target song, customers can choose whether they want to listen to the sample song or not.

If so, the site will respond to customers with a playback window where customers can click Play game to hear a sample Music. Sample music is considered to have a duration from 30 seconds to 1 minute.

If not, the customer can exit the site by closing it on the screen.

Step 4: This step will be done in case customers like music and want to buy it.

Users can click the Purchase button or Add to Cart located in the playback window. When they click the button, the site will take the customer to another window to book information to buy the product.

Step 5: When the customer completes the invoice, the website will check the customer's account type and ask the customer to choose.

There are three ways to pay for it: buying a single product, monthly payment plans and buying as gifts.

In case of monthly package account, the system will check the validity of the account. If successful, the customer will enter to download. If not, ask the customer to choose another purchase.

Step 6: Download the product, during this period, customers can observe invoices related to their purchases. After that, the customer can click the download button. The browser then performs the automatic download function, downloading the song client or computer, mobile phone.

References: