Project 2 Specification

Faculty	Information Technology	Module Name	Software Engineering
Module Code	ITSEA0	Project Number	2
Total Marks	100	Copy Editor	Ms Nicole Stern

Instructions to Student

1. All work, including draft notes, must be submitted with the completed project.
2. The program must be operational with as few faults as possible.
3. 10% will be deducted from this project if it is returned for resubmission due to plagiarism.
4. The pass mark is 60%.
5. 10% will be deducted for this project if it is handed back for resubmission.
6. 20% will be deducted if this project is handed back for resubmission due to plagiarism.

Resource Requirements

- The module Learning Manual may be referenced.
- You may use the tool of your choice to create the UML diagrams.

Delivery Requirements (evidence to be presented by students)

The project submission must include:

- Submission consists of a neatly formatted document containing the specified diagrams and documentation.
- Your name, student number, project number and date of submission must be included on the document's cover page.

Plagiarism and Referencing

Consult the section at the end of this document, which outlines how negative marking will be applied as well as the way in which it will affect the assignment mark.

Section A

Question 1 — 100 Marks

Develop a system that will help keep records of DVDs and videos for movies that are sold or bought. These DVDs or videos are only sold to registered customers. To register, a name, an ID number and a valid email address are required. This information must be provided online and validated, then sent to the administrator to provide the customer with the permission to access and search the DVDs and the video database. If the customer information is somehow incorrect, the customer is requested to resubmit the information.

There are three types of users:

- Regular customers
- System users
- Administrators

Each of these users has different duties/roles that they play as described below:

Regular customers

The regular customers use different searches to access the DVDs and the video database.

System users

The system users can post DVDs or videos to be sold. These users have permission to add new movies to the database. When a regular customer has finished with the search, a communication with the seller is made in order to buy the product from him.

Administrators

The administrator will be in charge of administering the database and users, giving or cancelling selling privileges to regular customers.

Purchasing a movie

When a customer is done searching for a movie and is ready to buy, they communicate (via email or telephone) with the seller to purchase the movie. The payment is only to be made online

via a debit/credit card. Once the movie has been purchased, it is removed from that specific customer's profile in the database. An invoice must be emailed to the customer upon a successful payment. If the customer cannot find the movie they are looking for, they must ensure the spelling is correct and re-input the movie name.

Using the information provided above, answer the following questions:

1. List only the actors that participate in the movie store system process.

2. Determine the use cases for the movie store system when the customer searches for a video and payment process.

3. Write elaborate scenarios for the customers purchasing a movie. Include any alternative scenarios as mentioned in the specifications.
4. Draw a use case diagram for the payment process, showing the actors and use cases listed in Questions 1 and 2.

5. Draw an activity diagram for the purchasing of a movie. Show all activities involved from the time the customer registers until purchasing a movie. Show partitions for the Customer, System, Administrator and System user.

6. Draw a class diagram for the entire system, including all relevant classes. Do not include a GUI class.

7. Draw a communication diagram for creating an invoice. Include the seller and objects of the GUI, products, customer and the invoice classes only. The invoice class must be shown as created during the process, and as destroyed after all other steps in the process are completed.

8. Draw a state machine diagram for an object of the invoice class.

9. Conduct research on five software development methodologies and describe the appropriate model that you and your team will follow to deliver a working system to the client.
10. Motivate why you chose the model

11. Each diagram **(Questions 4 to 8 only)** must include documentation that explains the purpose of the diagram. See the project example in the Learning Manual to get an idea of what is required for the documentation.

End of Question 1

Section B

Plagiarism and Referencing

Eduvos places high importance on honesty in academic work submitted by students, and adopts a policy of zero tolerance on cheating and plagiarism. In academic writing, any source material e.g. journal articles, books, magazines, newspapers, reference material (dictionaries), online resources (websites, electronic journals or online newspaper articles), must be properly acknowledged. Failure to acknowledge such material is considered plagiarism; this is deemed an attempt to mislead and deceive the reader, and is unacceptable.

Eduvos adopts a zero tolerance policy on plagiarism, therefore, any submitted assessment that has been plagiarised will be subject to severe penalties. Students who are found guilty of plagiarism may be subject to disciplinary procedures and outcomes may include suspension from Eduvos or even expulsion. Therefore, students are strongly encouraged to familiarise themselves with referencing techniques for academic work. Students can access the Guide to Referencing on *my*LMS.

Negative Marking

- At the discretion of the marker, if a student has committed plagiarism, an immediate 0% will be awarded for the project and 10% will be deducted from their next submission.