1 Requirements Documentation (Tutorial 4)

Started: 5 Oct at 20:17

Quiz instructions

Purpose

To be able to identify the requirements for a database, articulate it in a mission statement and objectives, as well as identify the personas involved and the requirements.

This is an individual assessment worth 10% of your final mark.

Unit learning outcomes

1. Apply a design thinking approach to understand and solve a stakeholder problem.

3. Apply ethical, professional and technical considerations in the development of the project (data management) solution.

5. Identify project-related skills requirements, locate suitable resources and acquire the appropriate skills mostly independently.

Graduate Attributes

- Communication 1 - Verbal communication
- Digital literacies 1 – Information literacy
- Digital Literacies 2 – Technical literacy

Submission Requirements

These activities should be completed as **part of tutorial 4**. You are **required to come to the tutorial to answer potential questions** about it. The tutor **may not mark it** in your absence. The submission is due after the tutorial of week 5, to give you extra time to complete the activities if needed.

Question 1	**3 pts**

Scenario

Vinyl Records Ltd are becoming more and more popular and have to consider computerising the sales ordering and stock control system. The founder of Vinyl Records Ltd explains the problem as follows:

Customers are currently sending us orders using e-mail. Each order may contain requests for variable quantities of one or more titles from our records.

For all records, we keep a stock file showing for each record who is the preferred supplier, how many copies we have left of each title, the reorder level and other details.

We have one guy working in shipping. He packs and sends the records if they are in stock in response to the customer order. The accountant still sends the invoice in a return e-mail when the records have been dispatched. Any items that were not in stock are placed on a back order list and these items are usually re-ordered from the preferred supplier. Occasionally items are ordered from alternative sources.

In response to the invoices sent by the accountant, the customers send in payments. Sometimes a payment will be for one invoice, sometimes for part of an invoice and sometimes for several invoices and part-invoices. The accountant has a heck of a time making sure the whole payment has been received for an order.

Write a mission statement and objectives for this scenario.

Mission Statement: Vinyl Records Ltd is committed to providing our customers with the best possible experience when buying vinyl records. We strive to provide a wide selection of records, excellent customer service, and efficient order processing. We are committed to computerize Vinyl Records Ltd's sales ordering and stock control system to improve efficiency and customer satisfaction.

Objectives:

- To computerize the sales ordering and stock control system to improve efficiency and accuracy.
- To improve customer service by providing a more streamlined and user-friendly ordering process.
- To reduce the workload on the accountant by automating the invoice and payment processing process.
- To gain insights into customer behavior and sales trends by analyzing the data collected in the new system.
- Implement a system that automatically processes customer orders received via email, extracting relevant information regarding titles, quantities, and customer details.

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Question 2   2 pts

Identify the personas/actors in this scenario.

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1. **Founder of Vinyl Records Ltd:** Initiator of the project, concerned with overall business efficiency and customer satisfaction.

2. **Shipping Clerk:** Responsible for packing and dispatching records. Requires a user-friendly interface to manage orders and stock.

3. **Accountant:** Manages invoicing and payment reconciliation. Needs a streamlined system for efficient financial operations.

4. **Customers:** Initiators of orders and recipients of records. Experience should be seamless and reliable.

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Question 3   3 pts

Discuss and decide on the requirements of each actor and the potential business
rules/constraints.

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Requirements:

1. Customers:
    1. should be able to place orders online.
    2. Customers must be able to browse and search for vinyl records.
    3. Customers must be able to add items to their cart and checkout.
    4. Customers must be able to view their order history and track the status of
       their orders.
2. The system should be able to:
    1. keep track of inventory levels.
    2. generate invoices automatically.
    3. generate shipping labels automatically.
    4. accept payments online.
    5. generate reports on sales and inventory levels.
3. Shipping clerk:
    1. The shipping clerk must be able to view a list of all pending orders.
    2. The shipping clerk must be able to mark orders as shipped.
    3. The shipping clerk must be able to print shipping labels.
4. Accountant:

    1. The accountant must be able to generate invoices for orders.

    2. The accountant must be able to process payments from customers.

    3. The accountant must be able to view a report of all outstanding invoices.

5. Founder of Vinyl Records Ltd:

    1. End-to-end visibility of the order processing system.

Business Rules/Constraints:

1. The system should be secure and protect customer data.
2. Only items that are in stock can be ordered.
3. The system should be user-friendly and easy to use.
4. The system should be scalable and able to handle increased demand.
5. Customers must pay for their orders before their orders can be shipped.
6. The system must track the inventory levels of all vinyl records.
7. The system must generate accurate invoices and track payments from customers.
8. The system must be reliable and minimize downtime.

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Question 4   2 pts

Identify the tables and associated fields based on your analysis.

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1. Orders Table
   - OrderID (PK)
   - CustomerID (FK)
   - Title
   - Quantity
   - OrderDate
   - Status (Proccessing, Pending, Ordered, Have Problem)
2. Inventory Table
   - RecordID (PK)
   - RecordTitle
   - PreferredSupplier
   - Quantity
   - ReorderLevel
3. Shipping Table
   - OrderID (PK)
   - ShippingDate
   - ShippingStatus (Pending, Processing, Arrived, Fail)
4. Invoicing Table
   - InvoiceID (PK)
   - OrderID (FK)
   - InvoiceDate
5. Payments Table
   - PaymentID (PK)
   - InvoiceID (FK)
   - OrderID (FK)
   - CustomerID (FK)
   - PaymentAmount
   - PaymentDate
   - PaymentMethod
6. Customers Table
   - CustomerID (PK)
   - FirstName
   - LastName
   - Email
   - ShippingAddress
   - BillingAddress

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