Final Year CSE AY 2023-24

Project Management

Assignment No 3   Due date-06/09/2023

(UML diagrams)

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1. **For the scenario given below create/draw different UML diagrams (DFD level 0, 1 and 2).**

   Online Bookstore System

   An online bookstore allows users to browse books, add them to a cart, and then purchase them. Once purchased, users can download the digital version or opt for home delivery for physical copies.

   Entities (External Entities):

   1. Customer: The person using the online bookstore.
   2. Payment Gateway: External system to handle transactions.
   3. Warehouse: Physical location where books are stored.

   Processes:

   1. Search for Book: Customers can search for books using this process.
   2. Add to Cart: Customers can add books to their cart using this process.
   3. Checkout: Process where customers finalize their purchase.
   4. Order Processing: Process where the order details are sent for either digital delivery or physical shipping.

   Data Stores:

   1. Book Catalog: A database or store where all books and their details are stored.
   2. Customer Cart: Temporary storage where selected books are held before purchase.
   3. Order History: A record of all transactions and purchases.

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2. For the scenario given below draw an activity diagram.

Hotel Room Booking Process

Description:

A customer wishes to book a room in a hotel. The process starts with checking room availability for the desired dates. If a room is available, the customer provides personal details and payment information. If the payment is successful, the room is reserved, and a confirmation is sent to the customer. If the room is not available or payment fails, the customer is informed of the issue.

Activity Diagram Steps:

1. Start the Process: Begin with a start node.
2. Check Room Availability:
3. Decision Node: "Is the room available for desired dates?"

    If yes, proceed to the next step.

    If no, provide a message "Room not available" and end the process.

4. Enter Personal and Payment Details: The customer provides personal details and payment information.
5. Process Payment:

    Decision Node: "Is payment successful?"

    If yes, proceed to the next step.

    If no, provide a message "Payment failed" and end the process.

6. Reserve Room: The system reserves the room for the customer.
7. Send Confirmation: The system sends a booking confirmation to the customer.

8. End the Process: End with an end node.

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*Note: For reference use notes from: 1. https://creately.com/blog/diagrams/uml-diagram-types-examples/

2. https://www.javatpoint.com/uml-diagrams

Free UML tools:

1. StarUML
2. Umbrello
3. Draw.io
4. UML designer tool
5. Umple