Use Case: Library Management System

Tasks:

* Search for Books
* View Book Details
* Borrow a Book
* Return a Book
* Send Borrowing Confirmation

PPT Slide #1: Complete User Case Story Process Diagram

Diagram: Show the flow from searching for books to sending the borrowing confirmation.

Components: User searches -> User views details -> User borrows a book -> User returns a book -> Borrowing confirmation sent.

PPT Slide #2: Task #1 - Search for Books

Diagram:

Inputs: Search criteria (title, author, genre)

Outputs: List of available books

Bullet Points:

Task: User inputs search criteria to find available books in the library catalog.

Inputs/Outputs: Inputs include title, author, and genre; outputs are a list of books matching the search criteria.

Stateless: This task is suitable for a stateless function as it does not require retaining any user-specific information between requests. Each search is independent of the previous ones.

PPT Slide #3: Task #2 - View Book Details

Diagram:

Inputs: Book ID

Outputs: Detailed information about the book (title, author, summary, availability)

Bullet Points:

Task: User selects a book from the search results to view its details.

Inputs/Outputs: Input is the book ID; output is detailed information about the book, including title, author, summary, and availability.

Stateless: This task is suitable for a stateless function because it involves fetching data based on a single request without needing to remember previous interactions.

PPT Slide #4: Task #3 - Borrow a Book

Diagram:

Inputs: Book ID, User ID

Outputs: Borrowing confirmation, updated book status

Bullet Points:

Task: User borrows a book from the library.

Inputs/Outputs: Inputs are book ID and user ID; outputs include a borrowing confirmation and an updated status of the book (e.g., marked as borrowed).

Stateful: This task requires maintaining state as it involves multiple steps (checking book availability, updating inventory, and recording borrowing details), making it a candidate for a stateful function.

PPT Slide #5: Task #4 - Return a Book

Diagram:

Inputs: Book ID, User ID

Outputs: Return confirmation, updated book status

Bullet Points:

Task: User returns a borrowed book to the library.

Inputs/Outputs: Inputs are book ID and user ID; outputs include a return confirmation and an updated status of the book (e.g., marked as available).

Stateful: This process should be stateful to handle the various steps involved in checking the book condition, updating the inventory, and processing any fees or penalties.

PPT Slide #6: Task #5 - Send Borrowing Confirmation

Diagram:

Inputs: User details (email), borrowing details (book ID, due date)

Outputs: Confirmation message (email or SMS)

Bullet Points:

Task: Send a confirmation message to the user after successful borrowing.

Inputs/Outputs: Inputs are user details (email) and borrowing details (book ID, due date); output is a confirmation message sent to the user.

Stateless: This task can be stateless as it simply involves sending a message based on a completed transaction. No state needs to be retained between requests.

Creating the PPT

To create these diagrams, you can use a tool like Microsoft PowerPoint or Google Slides. Here are some guidelines for each slide:

Slide #1: Complete User Case Story Process Diagram

Use flowchart symbols to represent each task.

Connect the tasks with arrows showing the flow from start to finish.

Slides #2-6: Task Diagrams

Use simple shapes to represent inputs and outputs.

Show the task in the center with arrows pointing to and from the task.

Include brief explanations in bullet points on the slide.

**Slide #1: Complete User Case Story Process Diagram**

**Script:**

"Welcome to the presentation on the Library Management System use case. This slide illustrates the complete process flow from searching for books to sending a borrowing confirmation.

The process starts with the user searching for available books using specific criteria. Once the desired book is found, the user can view its details. If the user decides to borrow the book, they proceed to the borrowing process, followed by eventually returning the book. After the book is borrowed, a borrowing confirmation is sent to the user. This seamless flow ensures an efficient library experience."

**Slide #2: Task #1 - Search for Books**

**Script:**

"Slide 2 focuses on the 'Search for Books' task. In this step, the user inputs search criteria such as title, author, and genre. The system processes these inputs and provides a list of available books that match the criteria.

The inputs are the search criteria entered by the user, and the output is a list of books that are currently available in the library. This task is suitable for a stateless function because each search request is independent and does not require retaining any user-specific information between requests."

**Slide #3: Task #2 - View Book Details**

**Script:**

"Slide 3 describes the 'View Book Details' task. Here, the user selects a book to view more detailed information about it.

The input for this task is the book ID, which the user selects from the list of search results. The output is detailed information about the selected book, including its title, author, genre, availability, and a brief description. This task is also suitable for a stateless function as it involves fetching data based on a single request without needing to remember previous interactions."

**Slide #4: Task #3 - Borrow a Book**

**Script:**

"Slide 4 illustrates the 'Borrow a Book' task. In this step, the user decides to borrow a book from the library.

The inputs are the book ID and the user's details. The output is a borrowing confirmation. This task requires a stateful function because it involves multiple steps, such as checking the book's availability, updating the inventory, and recording the borrowing transaction. Thus, it is essential to maintain the state throughout this process to ensure consistency and accuracy."

**Slide #5: Task #4 - Return a Book**

**Script:**

"Slide 5 focuses on the 'Return a Book' task. In this step, the user returns a previously borrowed book to the library.

The inputs are the book ID and the user's details. The output is a return confirmation. This process is also stateful, as it involves various steps like checking the book's condition, updating the inventory, and processing any fees that might be applicable. Maintaining the state is crucial to handle these steps accurately."

**Slide #6: Task #5 - Send Borrowing Confirmation**

**Script:**

"Slide 6 covers the 'Send Borrowing Confirmation' task. After a successful borrowing transaction, the system sends a confirmation message to the user.

The inputs for this task are the user's details and the borrowing details. The output is a confirmation message sent to the user. This task can be implemented as a stateless function because it involves sending a message based on the completed transaction without needing to retain any prior state information."

By following this script and keeping each explanation concise, you should be able to cover all six slides within a 10-minute timeframe. If you need further assistance or any adjustments, feel free to ask!