



ULAB

UNIVERSITY OF LIBERAL ARTS
BANGLADESH

Assignment

Course code: CSE 3103

Course Title: System Analysis and Design

Section: 03

Submitted to: Sohel Bashar

Submitted by:

Name: Mehraf Hossein Roni

ID: 222014027

Submission Date: 26.02.2025

Assignment: Identifying Events in Transaction-Processing Systems and University Course Registration Systems

Case 1: Identifying the Key Event in a Bank Account Transaction-Processing System

In a bank account transaction-processing system, an event is defined as an action that triggers a process within the system. Considering the sequence of actions taken by Kevin, the most relevant event that the system should define is:

Kevin makes a deposit in his savings account.

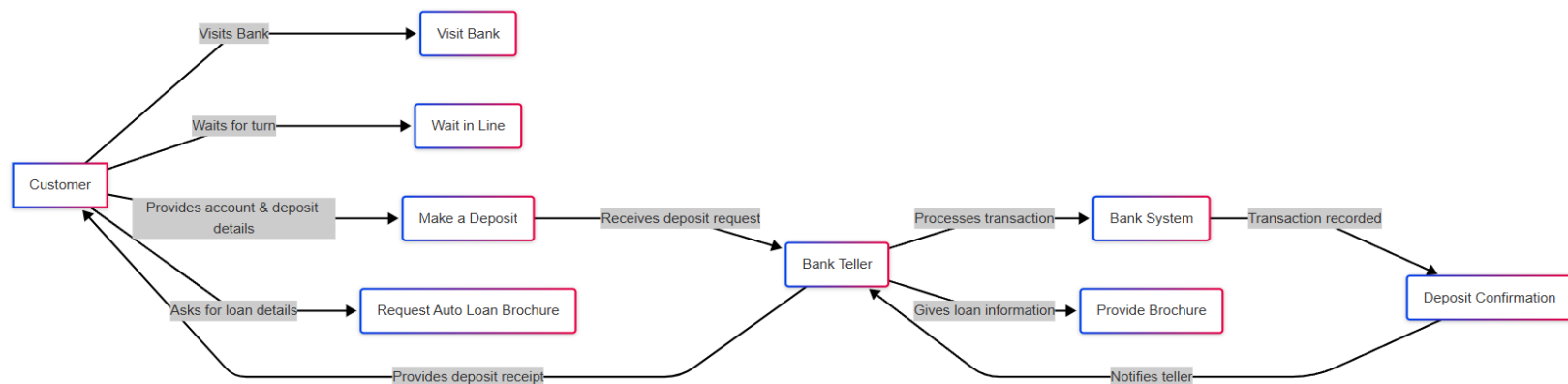
Reasoning:

Among the listed actions, the deposit transaction is the key event because it involves a financial operation that requires processing by the bank system. This step initiates a series of actions, such as:

- Recording the transaction in the customer's account.
- Updating the bank's ledger.
- Generating a deposit receipt as proof of the transaction.

Other actions, such as Kevin receiving a check, wanting a car, or waiting in line, are either preparatory actions or unrelated to the transaction-processing system. The request for an auto loan brochure is a separate informational request and does not involve a financial transaction.

Thus, Step 6 - 'Kevin makes a deposit in his savings account' is the central event that should be recorded in the bank account transaction-processing system.



Case 2: Identifying Events in a University Course Registration System

A university course registration system must handle various external events. Below are examples of events based on the external event checklist:

1. External Agent Wants Something Resulting in a Transaction

Event: Student registers for a course

- A student selects a course and completes the registration process, triggering the system to update the student's enrollment status.

2. External Agent Wants Some Information

Event: Student requests course schedule

- A student queries the system to retrieve information about available courses, class timings, and instructors.

3. Data Changed and Needs to Be Updated

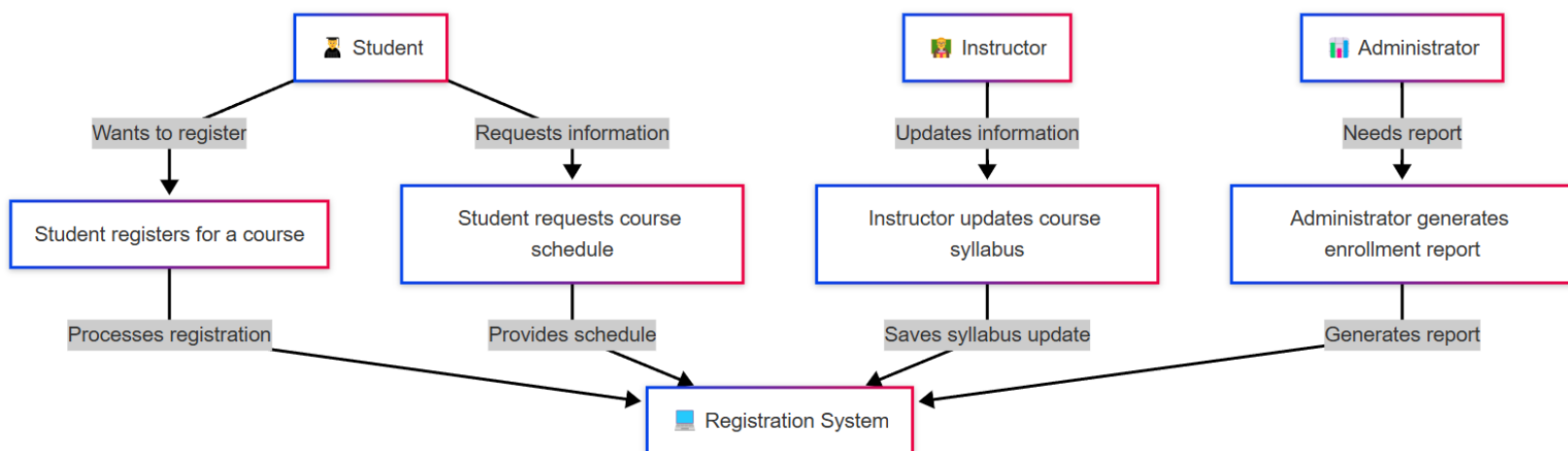
Event: Instructor updates course syllabus

- An instructor modifies the course syllabus, requiring an update in the system so that enrolled students can access the latest course materials.

4. Management Wants Some Information

Event: Administrator generates enrollment report

- A university administrator requests a report on student enrollments to monitor course popularity, allocate resources, and make strategic decisions.



Conclusion

In both cases, defining key events is crucial for effective system processing. In the bank scenario, the deposit transaction is the primary event, while in the university course registration system, various external events drive interactions between students, instructors, and administrators. Recognizing and properly structuring these events ensures seamless operations within both systems.