TCET

DEPARTMENT OF COMPUTER ENGINEERING (COMP)
[Accredited by NBA for 3 years, 3rd Cycle Accreditation w.e.f. 1st July 2019]
Choice Based Credit Grading System with Holistic Student Development (CBCGS - H 2019)
Under TCET Autonomy Scheme - 2019

Experiment No. 5: Sketch Activity, State Transition diagram for

the Online Bookstore Management System

Aim: To Sketch Activity, State Transition Diagram for Online Bookstore Management System.

Theory:

Activity Diagram: An activity diagram is a flowchart to represent the flow from one activity to another activity. The activity can be described as an operation of the system. The control flow is drawn from one operation to another. This flow can be sequential, branched,
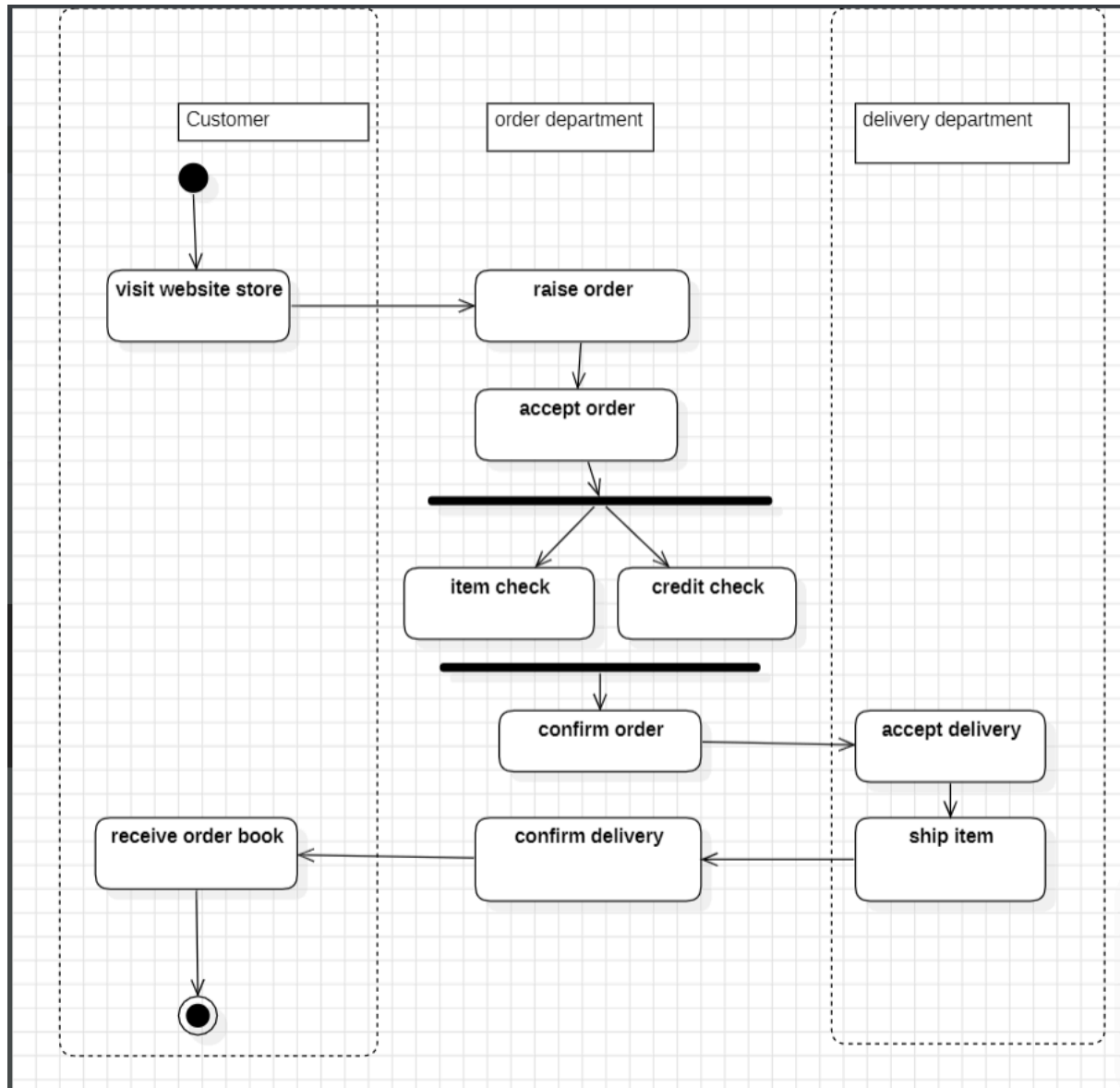
or concurrent. Activity diagrams deal with all types of flow control by using different elements such as fork, join, etc. The purpose of an activity diagram can be described as –

• Draw the activity flow of a system.

• Describe the sequence from one activity to another.

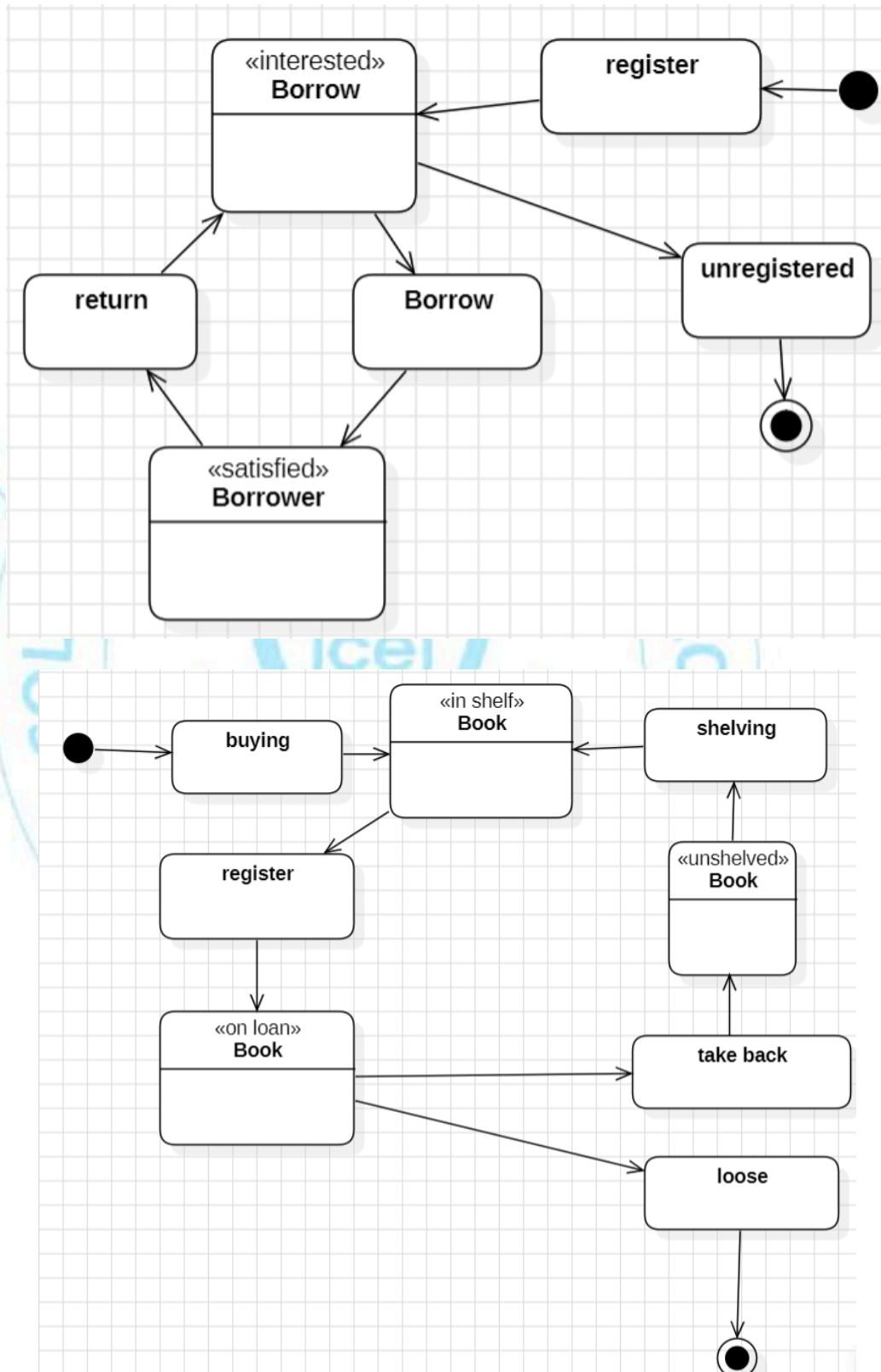• Describe the parallel, branched, and concurrent flow of the system.

State Transition Diagram: State-transition diagrams describe all of the states that an object can have, the events under which an object changes state (transitions), the conditions that must be fulfilled before the transition will occur (guards), and the activities undertaken during the life of an object (actions). State-transition diagrams are very useful for describing the behavior of individual objects over the full set of use cases that affect those objects. State transition diagrams are not useful for describing the collaboration between objects that cause the transitions.

Output:

   1. Activity Diagram

Customer	order department	delivery department

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Customer                order department              delivery department

   ●
   │
   ▼
┌──────────────────┐        ┌──────────────┐
│ visit website    │ ─────▶ │  raise order │
│ store            │        └──────────────┘
└──────────────────┘               │
                                   ▼
                            ┌──────────────┐
                            │ accept order │
                            └──────────────┘
                                   │
                        ━━━━━━━━━━━━━━━━━━━━━━━
                            │              │
                            ▼              ▼
                     ┌────────────┐  ┌──────────────┐
                     │ item check │  │ credit check │
                     └────────────┘  └──────────────┘
                        ━━━━━━━━━━━━━━━━━━━━━━━
                                   │
                                   ▼
                            ┌──────────────┐      ┌──────────────┐
                            │ confirm order│ ───▶ │accept delivery│
                            └──────────────┘      └──────────────┘
                                                         │
                                                         ▼
┌──────────────────┐      ┌──────────────┐       ┌──────────────┐
│ receive order    │ ◀─── │confirm       │ ◀───  │  ship item   │
│ book             │      │delivery      │       └──────────────┘
└──────────────────┘      └──────────────┘
        │
        ▼
       ◉
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2. State Transition Diagram

State Transition Diagram

Conclusion: We have successfully implemented the activity and state transition diagram of the Online Bookstore Management System.

Learning Outcome:
- Understand the concept of Activity and state transitions Diagram.
- Learn how to model the behavior of a system by representing Activity and State transitions Diagram.

For Faculty Use:

Correction Parameters	Formative Assessment [40%]	Timely completion of Practical [40%]	Attendance / Learning Attitude [20%]	
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