**INDEX**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Lab No.** | **Practical Performed** | **Date** | **Page No.** | **Remarks** |
|  |  |  |  |  |
| 1 | (a) Introduction to Unified Modelling Language (UML) and its type.  (b) Draw Use Case diagram for ATM application | 06-Jan-2021 | 1-6 |  |
| 2 | 1. Study Use case diagrams to answer given situaton. 2. Draw Use Case diagram for Ticket Distributor for a Train System | 20-Jan-2021 | 7-9 |  |
| 3 | 1. Write the ﬂow of events and specify all ﬁelds for the use case UpdateTariff that you drew in Lab 2. Do not forget to specify any relationships. 2. Draw a class diagram representing a book deﬁned by the following statement: “A book is composed of a number of parts, which in turn are composed of a number of chapters. Chapters are composed of sections.” Focus only on classes and relationships. 3. Add multiplicity to the class diagram you produced in Exercise (b). 4. Draw an object diagram representing the ﬁrst part of this book (i.e., Part I, Getting Started). Make sure that the object diagram you draw is consistent with the class diagram of Exercise (b). | 02-Feb-2021 | 10-13 |  |
| 4 | 1. Extend the class diagram of Book to include the following attributes:   • a book includes a publisher, publication date, and an ISBN  • a part includes a title and a number  • a chapter includes a title, a number, and an abstract  • a section includes a title and a number   1. Consider the class diagram of above question. Note that the Part, Chapter, and Section classes all include a title and a number attribute. Add an abstract class and a generalization relationship to factor out these two attributes into the abstract class | 10-Feb-2021 | 14-16 |  |
| 5 | 1. Draw a class diagram representing the relationship between parents and children. Take into account that a person can have both a parent and a child. Annotate associations with roles and multiplicities. 2. Draw a class diagram for bibliographic references. Use the references in Appendix C, Bibliography, to test your class diagram. Your class diagram should be as detailed as possible | 24-Feb-2021 | 17-18 |  |
| 6 | 1. Draw a sequence diagram for the warehouseOnFire scenario. Include the objects bob ,alice ,john , FRIEND , and instances of other classes you may need. Draw only the ﬁrst ﬁve message sends. In addition to the UML rules on sequence diagrams, all correct sequence diagrams for this exercise should include one or more actors on the left of the diagram who initiate the scenario, one or more objects in the center of the diagram which represent the system, and a dispatcher actor on the right of the diagram who is notiﬁed of the emergency. All actors and objects should be instances 2. Draw a sequence diagram for the ReportIncident use case of Figure 6-1. Draw only the first five message sends. A correct solution should include a FieldOfficer actor on the left, a Dispatcher actor on the right, and one or more classes in the middle representing the FRIEND system. The answer to this exercise should be consistent with the answer to the previous exercise, in the sense that all class and operation names should be the same | 03-Mar-2021 | 19-20 |  |
| 7 | Activity Diagram | 10-Mar-2021 | 21-25 |  |
| 8 | UML Diagrams of Minor Project – Online ACR Portal   * Use case Diagram * Class Diagram * Object Diagram * State Chart Diagram * Activity Diagram * Sequence Diagram * Collaboration Dagram | 21-May-2021 | 26-31 |  |