

Assignment 2.

1. In OOAD, there are various types of models like conceptual, structural, behavioral etc. What is the significance of these many types of model? Explain with an illustrative example.
2. Consider a Library System. Each book in the library contains bibliography, each bibliography consists of a number of reference to other books. A book will be referred to in many cases and therefore a reference can appear in more than one bibliography Use noun phrase identification strategies to find the conceptual classes of above cases. Also draw complete conceptual class diagram for above case.
3. Identify conceptual class and its supportive attributes for a Photocopier machine from the description given below and draw the conceptual class diagram for the same.

Initially the machine is off. When the operator switches on the machine it first warms up during which it performs some internal tests. Once the tests are over machine is ready for making copies. When operator loads a page to be photocopied and press 'start' button, machine starts making copies according to the number of copies selected. When machine is making copies, machine may go out of paper. Once operator loads sufficient pages, it can start making copies again. During the photocopy process, if paper jam occurs in the machine, operator may need to clean the path by removing the jammed paper to make the machine ready.
4. For the specification given below, use non phrase analysis method to create a domain model.

XYZ Restaurant in Kathmandu would like to automate its building service. A waiter takes an order for each table in the restaurant along with order details (item name and quantity). Customers are allowed to order more items after their first order. A bill is generated at the end for each customer having the following details; restaurant name, date, bill number, item, quantity, amount and total amount.
5. Sequence diagram aids the implementation of Reactive System. If you agree on the statement justify with reason and model diagram.
6. Prepare the sequence diagram for bus ticket reservation system.
7. Draw the sequence for login page. Use four scenario as following: User, User Interface, Login-Session (Active or Expire), system Validity. Show all scenarios with brief explanations.

8. Draw System Sequence Diagram for a Library Management System with following requirements.

A college library has 4 librarians to manage and issue the books to the users who are either students or faculty staffs. The library contains the books belonging to Computer and Humanities streams. The books are course books, reference books, book banks etc. The users must log into system to search the required books and may reserve the books earlier. The librarian issues the books to the users and also charge fine in case of delayed return or loss of the book. The librarian asks for the "Sanu Publisher" to supply the necessary books into the library. The librarian manages all the users.