

# Kantipur Engineering College

Dhapakhel, Lalitpur

Subject: Object-Oriented Programming

Lab-2

Title:

**Classes and Objects**

Objective:

- To strengthen problem solving ability by using the characteristics of an object-oriented approach.
- To teach the student to implement object oriented concepts
- To be familiar with structure and analyze how class addressed the shortcoming of structure

Theory:

- Introduction to object oriented Programming
- Class and object
- Defining member function inside the class and outside the class
- Data hiding
- Abstraction
- Access specifier
- array of object
- memory allocation of object
- structure vs class

Lab exercises

1. Write a program to create a structure in C++ named hospital giving details about the patient admitted. Details are:

- a. Patient name
- b. Age
- c. Bed number
- d. Nature of illness
- e. Date of birth
- f. Gender
- g. Ward number
- h. Date of admission

2. Write a program to implement a class Employee having following members.

DATA MEMBERS	
Emp_id	Employee id
Name	Employee name
Address	Employee address
Salary	Employee salary
Department	Employee department
MEMBER FUNCTIONS	
Input ()	Initialize information of employee
Display ()	display information of employee

Perform simple input and output for

- i. One employee
- ii. 50 employees
- iii. Modify the code for 50 employees such that only the employees with salary greater than 55000 is displayed.

3. Define a class named 'Bank Account' to represent following members

**DATA MEMBERS:**

- Account Number
- Name of Depositor
- Account Type
- Balance Amount

**MEMBER FUNCTIONS:**

- Input members
- Deposit Amount
- Withdraw Amount
- Display Balance

In this question, after entering the details for a user, the user should be given the option to withdraw amount, deposit amount or check their balance until they want to exit.