2B03CSC Lab-I

Advanced C Programming

No. Practical Hours / Week: 02 Credit:1

Guidelines

- **Follow standard coding method**
- **Write Algorithm and draw flow chart neatly**
- **The output of the program should be neatly formatted**
- **Practice all the programs in the lab**
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2B03CSC LAB-I ADVANCED C PROGRAMMING

No. Practical Hours / Week: 02 Credits: 1

GUIDELINES

- Follow standard coding method
- Write Algorithm and draw flow chart neatly
- The output of the program should be neatly formatted
- Practice all the programs in the lab

SAMPLE PROGRAM LIST

1. Write a program to find the roots of a quadratic equation.
2. Write a program to accept three numbers and find the largest and second largest.
3. Write a program to count number of vowels, consonants and spaces in a line of text.
4. Find Greatest Common Divisor (GCD) of two numbers
5. Write a program to accept two numbers and perform various arithmetic operations (+, -, *, /) based on the symbol entered.
6. Write a program to print all the Armstrong numbers between any 2 given limits.
7. Write a program to check whether the given number is a Prime number or not
8. Write a program to check whether the given number is in Fibonacci sequence.
9. Write a program to check whether given two numbers are Amicable numbers or not.
10. Write a program to check whether the given number is a Perfect number or not
11. Write a program to convert a decimal number to binary equivalent.
12. Write a program to implement various string handling functions

13. Write a program to check if the given matrix is magic square or not.
14. Write a program to check whether a given matrix is an Identity matrix or not.
15. Write a program to perform matrix multiplication.
16. Write a recursive program to find the factorial of a given number.
17. Write a function to swap two numbers using pointers
18. Write a program to check whether the string is a Palindrome or not using pointers
19. Create an employee structure and display the same.
20. Create a file and store some records in it. Display the contents of the same.

QUESTION PAPER PATTERN

Two questions will be selected by the examiners from Part A (Qn Nos1-10) and Part B (Qn.Nos 11-20) . Students have to write and execute both programs. Flow chart/ Algorithm of one program is compulsory.

4B06CSC Lab-II
Programming with C++ & Data Structure
Practical Hours / Week: 2 **Credit: 1**

Guidelines

- **Follow standard coding method**
- **The output of the program should be neatly formatted**
- **Practice all the programs in the lab**

The lab consist of two sections: A:Programming in C++ and B: Data Structures. Equal weightage will be given for both sections. For internal assessment, each part may be evaluated independently and final CA grade shall obtained by combining them. End semester examination question shall carry questions from both sections.

Sample Program list
Part A (C++)

1. Program for class definitions and usage involving variety of constructors and Destructors.
2. Program to perform multiple inheritance.
3. Program to perform multilevel inheritance
4. Program involving operator overloading.
5. Program involving virtual base classes.
6. Program involving friend functions.
7. Program to demonstrate function overloading.
8. Program to allocate memory dynamically.
9. Program to demonstrate string processing
10. Program to demonstrate file streams
11. Program to find the inverse of a matrix.
12. Program to copy the contents of one file into another.

Part B (Data Structure)
Write C++ programs for the following:

1. Queue operations.
2. Stack operation.
3. Add two polynomials
4. Insertion sort.
5. Binary and linear search.
6. Quick sort
7. Singly linked list operations: add / delete / print / count.
8. Circular queue.
9. Tree traversal.
10. Merge two sorted linked lists.
11. Linked stack to reverse a string.
12. Doubly linked list: add / delete nodes.

QUESTION PAPER PATTERN

One question will be selected by the examiners from each part. Students have to write and execute both programs.

4B07 CSC Lab-III
.NET Programming &DBMS
Practical Hours / Week: 3 Credit: 2

Guidelines

- ***Follow standard coding method***
- ***The output of the program should be neatly formatted***
- ***Practice all the programs in the lab***
- ***Include any ten programs from part A and B in practical recode***

Note *The lab consist of two sections: Programming in .NET and B: Data Base Management System. Equal weightage will be given for both sections. For internal assessment, each part may be evaluated independently and final CA grade shall obtained by combining them. End semester examination question shall carry questions from both sections*

Sample Program List
Part A (.NET)

1. To implement output parameter and reference parameter.
2. Create a web based / windows based e-mail form with all validations.
3. Check whether the number is prime or not using windows application.
4. To implement the concept of namespace.
5. To implement the concept of interfaces.
6. To implement the concept of events.
7. To implement exception handling.
8. To design a calculator in windows form.
9. To implement data controls in windows form.
10. To implement validation controls in web form.

Part B (Data Base Management System)

1. PostgreSQL
    a. Introduction
    b. Logging on to PostgreSQL
    c. Creating Database
    d. Accessing a Database
2. Data Definition Language (DDL)
    a. Create, Drop Alter Keywords b. Tables c. Column d. Views
3. Integrity Constraints
    a. Types of Constraints
    b. Referential Integrity
    c. Defining Constraints
4. Data Manipulation Language (DML)
    a. Insert b. Update c. Delete
5. Data Query Language
    a. Selecting Columns
    b. Duplicate Information (DISTINCT)
    c. Sorting Information
    d. Filtering Data Using Where
    e. Group By and Having Functions
    f. Aggregate Functions.

6. Retrieving Data from Multiple Tables
    a. Joining Tables (Equi-Joins, Non-Equi-Joins, Self Join)
    b. Aliases for Table Names
7. Sub-Queries
    a. Basic Sub queries
    b. Multiple Column Sub queries
    c. Sub queries with Having
8. SQL Functions
    a. The Concatenation Operator
    b. Column Aliases
    c. String Functions
    d. Arithmetic Functions
    e. Date Functions
9. Sequence
10. Functions and Triggers.

QUESTION PAPER PATTERN

One question will be selected by the examiners from each part. Students have to write and execute both programs.

6B17CSC Lab-IV
Java & Shell Programming
Practical Hours / Week: 3 Credit: 2

Guidelines

- **Follow standard coding method**
- **The output of the program should be neatly formatted**
- **Practice all the programs in the lab**
- **Include any ten programs from part A and B in practical recode**

The lab consist of two sections: A: Programming in Java Programming and B: Shell programming Equal weightage will be given for both sections. For internal assessment, each part may be evaluated independently and final CA grade shall obtained by combining them. End semester examination question shall carry questions from both sections.

Sample Program List

Part A Java)

1. Write a java program to perform various string operations using java class.
2. Write java program to implement interface.
3. Write java program that handles user defined and built in exceptions. Use try –catch statement.
4. Write java program to implement Applet.
5. Write java program to implement a calculator using suitable AWT controls.
6. Draw different figures using menu.
7. Program to implement the traffic signal.
8. Write a java program to demonstrate threads.
9. Illustration of packages.
10. Implementation of multithreading by extending Thread class.
11. Program to compare two values in the text boxes using AWT.
12. Program to implement student database using JDBC.

Part B (Shell Programming)

1. Shell Script Program to perform all Arithmetic operations.
2. Shell Script Program to find simple interest
3. Shell Script Program to find Area of Square, Rectangle, Circle.
4. Shell Script Program to print your Address ‘n’ times.
5. Shell Script Program to find whether number is even or odd.
6. Shell Script Program to find whether number is +ve, -ve or 0.
7. Shell Script Program to find Greatest of 3 numbers.
8. Shell Script Program to find whether year is Leap year or not.
9. Shell Script Program to print natural numbers from 1 to 10 using WHILE loop.
10. Shell Script Program to print perfect numbers from 1 to 100.
11. Shell Script Program to reverse a number.
12. Shell Script Program to find whether the given number is perfect or not.

QUESTION PAPER PATTERN

One question will be selected by the examiners from each part. Students have to write and execute both programs.

6B18CSC Lab-V
Web Technology
Practical Hours / Week:2 Credit: 2

Guidelines

- **Follow standard coding method**
- **The output of the program should be neatly formatted**
- **Practice all the programs in the lab**

Sample Program list

1. Develop an HTML page using all basic tags
2. Develop an HTML page containing all types of lists
3. Write an HTML code to insert an image into the web page. Use the attributes height, width and border. Also align some text with respect to the images
4. Create a web page giving the following train details in a tabular form with the heading Train Time Table.
   Train name, starting place, destination, arrival and departure time and fare.
5. Create an HTML page with images. Clicking on the images should lead to external documents.
6. Develop an HTML page that accepts any mathematical expression, evaluates that expression and display the result of the evaluation.
7. Create a web page for your college using frames, images and hyperlinks.
8. Create an email registration form. Give necessary validations
9. Form Validation using Java Script
10. Write a JavaScript code using arrays.
11. Create a web page that illustrate the onMouseOver and onMouseOut event Handlers
12. Write a Javascript program to display the current time
13. Write a Javascript program to print the prime numbers within a range
14. Write a Javascrpt program to show the working of alert()
15. Write a JavaScript program to find the factorial of a number.
16. Form Processing using PHP
17. Form validation using PHP
18. Storing data in MYSQL using PHP

QUESTION PAPER PATTERN

Two questions will be selected by the examiners from Part A (Qn Nos1-09) and Part B (Qn.Nos 10-18) . Students have to write and execute both programs.

4C05CSC
Lab I (C Programming, DBMS & Visual Basic)

Guidelines

a) Students have to practice all the programs given in the list
b) Lab consists of two sections, Section A programming with C and Section B DBMS and Visual Basic. Equal mark will be given for both sections.
c) For internal assessment each section may be evaluated independently and final CA grade shall be obtained by combining them.
d) End semester (4th Sem) examination question shall carry questions from both sections. Students have to write and execute both programs.

Sample Programs List

Procedure Oriented Programming Using C

1. Develop a program to find the number of and sum of all integers greater than 100 and less than 200 that are divisible by 7.
2. Admission to a professional course is subject to the following conditions:
   a) Marks in mathematics >=60.
   b) Marks in Physics >=50.
   c) Marks in Chemistry >=40.
   d) Total in all three subjects >=200 Or
   e) Total in Mathematics and Physics >=150.

   Given the marks in the three subjects, develop a program to print whether an applicant is eligible or not.
3. Develop a program using do-while loop to print the first n fibonacci numbers.
4. Develop a program to sort a list of n positive integers in ascending/descending order.
5. Implement a simple calculator using switch statement.
6. Program to find the factorial of a number using recursion.
7. Program to find whether the string is palindrome or not.
8. Program to check whether the given number is prime or not.
9. Program to add and subtract two matrices.
10. Program to find biggest, smallest, sum and difference of two numbers using functions.
11. Program to find the binary equivalent of a positive integer
12. Program to search a list of integers for a key k.

DBMS. [Sample exercises are given below]

SQL -1

Create table students with fields sno, sname, sex, mark with sno as primary key and assign suitable constraints for each attribute. Insert five records into the table.
a) Alter the table by adding one more field rank.
b) Display all boy students with their name.
c) Find the Average mark
d) Create a query to display the sno and sname for all students who got More than the average mark. Sort the results in descending order of mark.
e) Create a sequence named ‘star’ to be used with student tables primary key
f) coloumn-sn0.The sequence should start with 10 & max value 99
g) Display girl student name for those who have marks greater than 40 and less than 20.

SQL -2 Create a table department with fields ename, salary, dno, dname, place with dno as primary key. Insert five records into the table.

a) Rename the field 'place' with 'city'

b) Display the employees who got salary more than Rs.6000 and less than10000 /-

c) Display total salary of the organization

d) Display ename for those who are getting salary in between 5000 and 10000.

e) Create a view named 'Star' with field ename, salary & place

f) Display ename and salary, salary rounded with 10 digits'*'

SQL -3 Create table loan with fields loanno, cname, cid, bname assigning suitable constraints. Insert 5 Records in to the table.

a. Calculate Rs 150 extra for all customers having loan. The added loan amount will display in a new coloumn.

b. Add one more field amount to loan table. Display cname for cid=2.

c. Create table depositor with fields cid and accno.

d. Insert five records into the table.

e. Display loanno and cname of a customer who is residing in Kannur city.

f. Display all information from loan table for loanno 2,8,10.

Visual Basic [Sample Program List]

1. Create a Calculator.
2. Write a program for traffic signal with the help of Timer.
3. Write a program to find out factorial, Fibonaci and prime numbers using list box.
4. Write a program to perform sequential File operation.
5. Write a program to perform Random File Operation.
6. Create a student database using data controls.

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