



SASTRA
ENGINEERING · MANAGEMENT · LAW · SCIENCES · HUMANITIES · EDUCATION
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School of Computing

End Semester Examination – July 2021

Course Code: CSE201 – (Semi-Lab)

Course Name: Object Oriented Programming in C++

Duration: 120 minutes

Max Marks: 50

Number of Questions: 02

Instructions

- You will be given two questions with 25 marks each
- Execute the programs and prepare a single PDF file containing both the programs and its output
 - Create a word file.
 - Type your Name and register number.
 - Copy the programs and paste it in the word file (Screenshots of the code will not be considered for evaluation)
 - Take a snapshot of the output & paste it after the corresponding program.
 - Convert the word file to pdf file, then upload
- Name your file as follows: 12010001_Lab.pdf (Give your reg.no)
- Submissions with multiple files will not be evaluated.
- Exam duration is between 9:30 am to 11:30 am
- Upload time: 11:30 am to 11:45 am

Question 1 (25 Marks)

Design a class named, "**MyStringArray**" to store an array of 5 strings. Include the following member functions to do the basic operations on array elements.

- (i) Member function to read the input strings.
- (ii) Member function to display all the strings.
- (iii) **Overload unary + operator** for sorting the strings in alphabetical order.
- (iv) Conversion operator for converting **MyStringArray type to int type**, which should return the total number of characters in the array of strings.

Write a main() program to test the above member functions by creating an instance of the class MyStringArray.

Question 2 (25 Marks)

Create a class called **Library** with data members as book_name, author_name, no_of pages, no_of_copies, book_no.

- Use parametrized constructor to get the details for minimum 10 books.
- Write a membership function diskout() to store information into a file called "LIB.TXT"
- Write a membership function diskin() to retrieve the information from the file and display it using the display() function.
- Also, write a function to search for a particular book using book_no as a key element to search for and display all the details of that book.

Write appropriate member functions to model this scenario.