

PREFACE
CERTIFICATE

This is to certify that

Mr. Ashishranjan Prasad with enrolment no. **190303105021** and semester/division

5B1 has successfully completed his laboratory experiments in the Object-Oriented

Programming with Java (203105334) from the department of Computer Science And

Engineering during the academic year 2021-2022.



Date of Submission:

Staff In Charge:

Head of Department:

Name: - Ashishranjan Prasad

Enrolment no.: - 190303105021



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| Sr. No. | Experiment Title | Page No. | Date of Performance | Date of Submission | Marks | Sign. |
|---------|--|----------|---------------------|--------------------|-------|-------|
| 1 | Write a program to count the number of words that start with a capital letter. | 5 | 19/06/21 | 25/06/21 | | |
| 1.1 | Write a java program to take an array of strings as an input, and arrange strings in ascending order. | 6 | 25/06/21 | 26/06/21 | | |
| 2 | Write a program to find the largest number in an array of numbers using command line arguments. | 7 | 26/06/21 | 02/07/21 | | |
| 2.1 | Write a program to find factorial of number. Here, take number as command line argument. | 8 | 02/07/21 | 03/07/21 | | |
| 3 | Write a program to demonstrate class and objects using the concept of an array object. | 9 | 03/07/21 | 09/07/21 | | |
| 3.1 | Declare a class Box. Overload Box constructors with zero argument, one argument and three argument to initialize the members of the class. Declare a method to find volume of the box. | 11 | 09/07/21 | 10/07/21 | | |
| 4 | Write a program to demonstrate garbage collection using System.gc() or Runtime.gc(). | 13 | 10/07/21 | 16/07/21 | | |
| 4.1 | Write a program to show the use of finalize method for garbage collection. | 14 | 16/07/21 | 17/07/21 | | |
| 5 | Write a program to demonstrate static constants and final constants. | 15 | 17/07/21 | 20/07/21 | | |
| 5.1 | Write a program to create a class named as Bike which consist one final method called as run(), Declare a subclass Bike & demonstrate the use of final method. | 16 | 20/07/21 | 23/07/21 | | |



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|-----|--|----|----------|----------|--|--|
| 6 | Write a program to explain static polymorphism in java. | 17 | 23/07/21 | 27/07/21 | | |
| 6.1 | Write a program to find volume of Box using concept of method overloading. | 18 | 27/07/21 | 30/07/21 | | |
| 7 | Write a program to find the factorial of a number using interface. | 19 | 30/07/21 | 10/08/21 | | |
| 7.1 | Write a program to implement multiple inheritance in java using interface. | 20 | 10/08/21 | 13/08/21 | | |
| 7.2 | Create a package called Mathsoperation1, which must contain classes to perform addition, subtraction, create another package called Mathsoperation2, which must contain classes to perform multiplication and division operation. Create a main class and import the Mathsoperation1, Mathsoperation1 package in it to perform all the operations on the input numbers provided by the user. Finally, display the result of each operation on the console. | 21 | 13/08/21 | 17/08/21 | | |
| 8 | Write a program to design student registration form using AWT components. | 23 | 17/08/21 | 20/08/21 | | |
| 8.1 | Write a Java Program for Calculator Operations Using AWT Controls & appropriate layout manager. | 26 | 20/08/21 | 23/08/21 | | |
| 9 | Write a program to demonstrate array index out of bounds exception. | 36 | 23/08/21 | 27/08/21 | | |
| 9.1 | Create an interface Account with two methods deposit and withdraw. Create class Savings Account which implements the interface. Write a custom Exception handler for | 37 | 27/08/21 | 31/08/21 | | |



| | | | | | | |
|------|---|----|----------|----------|--|--|
| | Savings Account to handle the scenarios when withdrawn amount is larger than the balance in the account. | | | | | |
| 10 | Write a program to demonstrate class object locking using method level synchronization. | 39 | 31/08/21 | 31/08/21 | | |
| 10.1 | Write a program that executes two threads. One thread will print the even numbers and another thread will print odd numbers from 1 to 50. | 41 | 31/08/21 | 31/08/21 | | |