LAB PROGRAMS

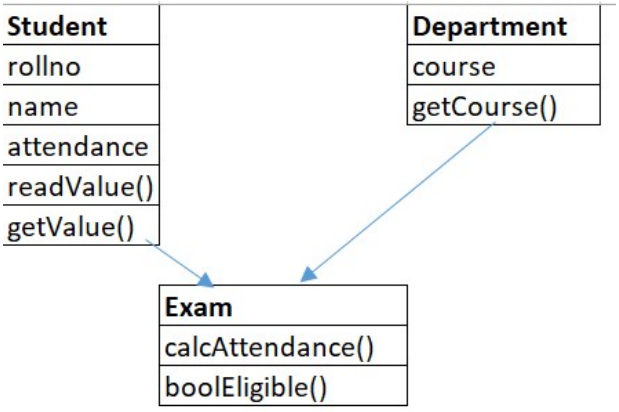
Blue colored to be written in rough record and black colored ones in fair record

Using Command Line arguments

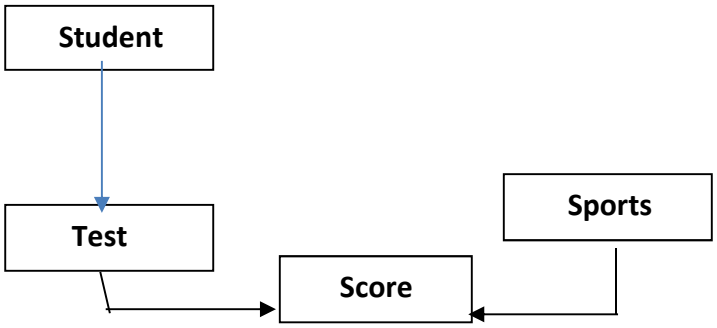
1. Write a program to find the sum of 2 numbers.
2. Write a program to find the biggest of three numbers.
3. Write a program to find the sum of n numbers.
4. Write a program to generate Fibonacci series upto N.
5. Write a program to generate prime numbers between two limits.
6. Write a program to swap two numbers without using a temporary variable. [a=a+b b=a-b a=a-b] a=30 and b=20 a=50 b=50-20=30

Using DataInputStream Class

7. Write a program to find the sum of 2 numbers.
8. Write a program to find the roots of a quadratic equation.
9. Write a program to read a number, count the number of digits and find the sum of digits.
10. Write a program to find the area, perimeter of rectangle using classes and objects.
11. Write a menu driven program to find the area of rectangle and square using method overloading.
12. Write a menu driven program to find the area of rectangle and square using constructor overloading.
13. Write a program to implement single inheritance using the variable super.
14. Write a program to implement method overriding.
15. Create an abstract class called Figure which contains three data members (length, breadth and height). Include an abstract method to find the area. Figure class also contains concrete methods to read the data members and to display them. Derive two classes Rectangle and Triangle from Figure and override area() to find the area of a rectangle and triangle.
16. Write a Java program to find the details of the students eligible to enroll for the examination (Students, Department jointly give the eligibility criteria for the enrollment class) using interfaces.



17. Write a program to display roll no, mark 1, mark 2, sports weightage mark and total score of a student using interface.



18. Create an interface Department containing attributes deptName and deptHead. It has an abstract method showData() for printing the attributes. Create a class Hostel containing hostelname, hostellocation and noofrooms and also have methods readData() and printData() for reading and printing the details. Then write another class named Student extending the Hostel class and implementing the Department interface. This class which contains the attributes studname, regno, electivesub and avgmark .Use getData() and displayData() for reading and printing the details.
19. Write a program to print the largest and smallest of n numbers.
20. Write a program to sort n numbers using a method called sortArray().Use readArray() and printArray() methods for reading and printing.
21. Create a class called AddMatrix. Include the following static methods a) To read the matrix b) To display the matrix c) To find the sum of 2 matrices.
22. Create a class called ProductMatrix. Include the following methods a. To read the matrix, b. To display the matrix c. Method product () to find the product of two

matrices and d) method called scalar() to multiply each element of a matrix with a constant value.

23. Create a class called MatrixTranspose. Include the following member functions a) To read the matrix b) To display the matrix c) To find the transpose of the matrix.
24. Create a class called MatrixSymmetric. Include the following static methods a) To read the matrix b) To display the matrix c) To check whether matrix is symmetric or not.
25. Write a program to sort n names in ascending order.
26. Write a program to check whether a string is a palindrome.
27. Write a program to print string in reverse order.
28. Write a menu driven program for extracting the substring, concatenating two strings, replacing a character with another character, conversion to lowercase, conversion to uppercase and trim.
29. Write a menu driven program to implement the string buffer methods charAt(), setCharAt(), append() and insert().
30. Write a package to find the factorial of a number. Import the package to find the ${}^{n}P_{r}$ and ${}^{n}C_{r}$ combination.
31. Write a package to perform the mathematical operations-Addition, Subtraction, Multiplication, Division and Modulus. Write a menu driven program for all these operations and import the package for the above said operations.
32. Write a package to check whether a number is prime. Import the package to check whether the sum of diagonal elements of a matrix is prime number.
33. Import the above package to check whether a number is prime and if it is prime check whether its digits are also prime.
34. Import the prime package to check whether a number is prime and it has a mirror prime. [for example 13 and 31 are mirror primes]
35. Write a Java program to throw IllegalArgumentException and print “Answer is zero” when any of the 2 numbers entered for multiplication is zero, else should display the product of 2 numbers.
36. Write a Java program to read n numbers and race an exception called NegativeException when you input a negative number.
37. Write a Java Program to calculate the Result. Result should consist of name, regno, date, and marks of semester three exam. Create a User Defined Exception class

MarksOutOfBoundsException, If Entered marks of any subject is greater than 100 or less than 0, and then program should create a user defined Exception of type.

38. Create a class Student with attributes roll no, name, age and course. If age of student is not in between 15 and 21 then generate user-defined exception "AgeNotWithinRangeException". If name contains numbers or special symbols raise exception "NameNotValidException". Define the two exception classes.
39. Write a multithreaded program to implement start(),stop() and yield() method in threads.
40. Write a multithreaded program to print odd numbers and even numbers from two different threads with suitable delay.
41. Write multithreaded program to print lowercase letters and uppercase letters from two different threads with suitable delay.
42. Write a Java program that implements a multi-thread application that has three threads. First thread generates multiplication table of 2. Second thread generates the multiplication table of 5. Third thread gives the multiplication table of 7. Display the output interchangeably with proper delay.
43. Write a program to implement the runnable interface.
44. Write an applet program to accept numbers in text boxes and display their sum.
45. Write a program to draw a star.
46. Write a program to display national flag.
47. Write a program to draw a house.
48. Write a program to draw Olympic rings.
49. Write a program to draw human face.
50. Write a program to implement moving circle.
51. Write a program to display traffic light.
52. Write a program to implement mouse events.
53. Write a program to implement keyboard events.

SWINGS

54. Write a program using swing to accept values in two textboxes and display the results of mathematical operations in third text box. Use four buttons add, subtract, multiply and divide.

55. Write a program using swing to calculate the electricity bill. The form should contain text boxes for reading consumer no., consumer name, current reading and previous reading. The units consumed and total amount should be displayed in textboxes. There should be two checkboxes (option button) one for domestic and the other for commercial. On clicking the button Bill, the bill amount should be displayed in another text box. The calculation is as follows. For domestic Rs.2 for 1st 100 units and 3 rupees for the rest. For the commercial Rs.4 for the 1st 100 units and Rs.8 for the rest.
56. Write a program using swing to prepare a medical bill using checkboxes. The form should contain textboxes for reading patient id and patient name .The checkboxes are for x-ray, blood test, ultra sound scanning. The form should contain a button called bill and on clicking this total amount should be displayed.
57. Write a program using swings with JComboBox to calculate electricity bill.
58. Write a program to implement medical bill using JList.
59. Write a program to implement Calculator (Swings).
60. Write a swing program to accept a value in a textbox then find the area of a circle and display the result in the second textbox. (hint : A = πr2)
61. Write a swing program to accept an integer in a textbox then reverse that number and display the result in the second textbox.
62. Write a swing program to accept a number then check whether a given number is positive or negative and display the result in the second textbox.
63. Write a swing program to accept a value in a textbox then find the factorial of that number and display the result in the second textbox.
64. Write a swing program to accept a value in a textbox then find the Volume of a sphere and display the result in the second textbox? (hint :V = 4/3 πr3)
65. Write a swing program to accept an integer in a textbox then find the sum of digits of that number and display the result in the second textbox.
66. Write a program using swing to accept values in two textboxes then find the largest number and display the result in third text box.
67. Write a menu driven program to create a table, insert record, delete record, update records and display records from MYSQL.