List of Programs
MCA-I (ODD SEM 2022)

Problem 1: Write a Java program to demonstrate & understand the differences of String, StringBuffer & StringBuilder.

Problem 2: Write a Java program to demonstrate & understand at least 15 different methods from String, StringBuffer & StringBuilder.

Problem 3: Write a Java program to design a class "Complex" which represents complex numbers and perform operations on complex numbers. Test the Complex class on addition, subtraction, multiplication & division of complex numbers.

Problem 4: Write a Java program to Design a class "FileAccess" which manages different operations on text files having UTF-8/ UTF-16 formats:
    a) read: reads a portion of the file as per the parameters.
    b) write: writes text into the file at specific position with optional overwrite instruction.
    c) copy: copies the file

Problem 5: Write a Java program to copy multiple "csv" files into single one.

Problem 6: Utilizing nio, write a Java program to read all lines of a file into a collection and delete those lines from the collection which are containing a given string as a substring and write back the remaining lines from collection into the file to update the file.

Problem 7: Utilizing nio, write a Java program to read all lines of a file into a collection and delete those lines from the collection which are containing a given string as a substring and write back the remaining lines from collection into the file to update the file.

Problem 8: Utilizing nio, write a Java program to write all non redundant lines to a file continuously taken from user at prompt until user writes "exit".

Problem 9: Write a Java program to perform queries from the sales record stored in a data file as follows: salesman<>product<>sale amount<>sale date
Where <> is field separator and new line is record separator.
Find,   a)   highest selling product
          b)   highest selling salesman
          c)   total sale in the month of November-2021

Problem 10: Write a Java program to receive n number of names from user and keep them into a file and perform the operations below.
    i.   Search name by key.
    ii.   Find and replace name without disturbing the position of the name in the file.
    iii.   Remove the duplicate name from the file.

Problem 11: Write a Java program to print a sequence of numbers by three threads.
Problem 12: Write a Java program to create three threads such that

(A) ThreadA prints 1 to 50.
(B)ThreadB starts only after when ThreadA prints 10 and prints 10.1 to 10.50.
(C) ThreadC starts only after when ThreadB prints 10.20.1 to 10.20.50.

Problem 13: There are 50 strings in a shared collection. Write a Java program to create two threads which are deleting a line from the collection at a time. All threads should remain alive until the collection is not empty.

Problem 14: Write a Java program to create two threads. First thread appends a line of text into a file at a time and is alive till 5 lines are appended. Second thread displays the lines from the file at a time and goes off if all 5 lines are displayed at a time.

Problem 15: Write a JDBC program to connect to a database and demonstrate the Statement.

Problem 16: Write a JDBC program to connect to a database and demonstrate the PreparedStatement.

Problem 17: Write a JDBC program to connect to a database and demonstrate the CallableStatement.

Problem 18: Write a Servlet program to connect to a database and generate the page contains Tables combo, Fields combo and data area:
      Table combo contains all tables of the database.
      On selection of table combo Field combo contains all fields of selected table.
      On selection of field combo all data of selected field are to be displayed on the data area. If we select all fields from Field combo then respective table data are to be displayed.

19. Implement Session tracking in servlet using:
    a. Hidden from field
    b. Url re-write
    c. Cookies
    d. Session

Problem 20: Write a Servlet program to demonstrate initial parameter access from a servlet page.

Problem 21: Write a Servlet program to demonstrate parameter access from a servlet page.

Problem 22: Write a JSP program to demonstrate access bean object in different scopes. How to access bean object which was opened in a different page?

Problem 23: Write a JSP program to demonstrate at least five action tags.

Problem 24: Write a JSP program to demonstrate directives.

Problem 25: Write a JSP program to demonstrate initial parameter and request parameters access from a JSP page.