**File Handling Program Menu Driven: -**

import java.io.\*;

import java.util.\*;

class FileAction {

    Scanner sc = new Scanner(System.in);

    String filename, filenameNew;

    final String filePath = "D:/0\_work/java\_p/examW/";

    void fileGet() {

        System.out.println("Enter File Name : ");

        filename = sc.nextLine();

    }

    void fileMenu() {

        System.out.println("File Menu :");

        System.out.println("1.File Creation");

        System.out.println("2.File Write");

        System.out.println("3.File Read");

        System.out.println("4.File Rename");

        System.out.println("5.File Delete");

        System.out.println("6.File Name");

        System.out.println("7.File Path");

        System.out.println("8.Exit ");

    }

    void fileCreate() {

        File file = new File(filePath + filename);

        try {

            if (file.createNewFile()) {

                System.out.println("File Created Successfully!");

            } else {

                System.out.println("File already exists!");

            }

        } catch (IOException e) {

            System.out.println("Error Occurred while creating file!");

            e.printStackTrace();

        }

    }

    void fileWrite() {

        try (FileWriter fwrite = new FileWriter(filePath + filename)) {

            fwrite.write("Hello User!");

            System.out.println("Data Written in file successfully!");

        } catch (IOException e) {

            System.out.println("Error Occurred while writing to file!");

            e.printStackTrace();

        }

    }

    void fileRead() {

        try (FileReader fread = new FileReader(filePath + filename)) {

            int i;

            while ((i = fread.read()) != -1) {

                System.out.print((char) i);

            }

            System.out.print("\n");

        } catch (IOException e) {

            System.out.println("Error Occurred while reading from file!");

            e.printStackTrace();

        }

    }

    void fileName() {

        File file = new File(filePath + filename);

        System.out.println("File name is " + file.getName());

    }

    void filePath() {

        File file = new File(filePath + filename);

        System.out.println("File path is " + file.getAbsolutePath());

    }

    void fileDelete() {

        File file = new File(filePath + filename);

        if (file.exists()) {

            if (file.delete()) {

                System.out.println(file.getName() + " file deleted successfully!");

            } else {

                System.out.println("Failed to delete the file.");

            }

        } else {

            System.out.println("File does not exist.");

        }

    }

    void fileRename() {

        System.out.println("Enter new name for file : ");

        filenameNew = sc.nextLine();

        File fileOld = new File(filePath + filename);

        File fileNew = new File(filePath + filenameNew);

        if (fileOld.exists()) {

            if (fileOld.renameTo(fileNew)) {

                System.out.println("File renamed successfully!");

                System.out.println("File's Name is " + fileNew.getName());

            } else {

                System.out.println("Failed to rename the file.");

            }

        } else {

            System.out.println("File does not exist!");

        }

    }

}

class Case extends FileAction {

    Scanner sc = new Scanner(System.in);

    void switchCase() {

        System.out.println("Enter your choice : ");

        int choice = sc.nextInt();

        sc.nextLine(); // consume newline character

        switch (choice) {

            case 1:

                fileGet();

                fileCreate();

                break;

            case 2:

                fileWrite();

                break;

            case 3:

                fileRead();

                break;

            case 4:

                fileRename();

                break;

            case 5:

                fileDelete();

                break;

            case 6:

                fileName();

                break;

            case 7:

                filePath();

                break;

            case 8:

                System.out.println("Exited!");

                System.exit(0);

            default:

                System.out.println("Invalid Choice!");

                break;

        }

    }

}

class FileMenu {

    public static void main(String[] args) {

        Case cs = new Case();

        while (true) {

            cs.fileMenu();

            cs.switchCase();

        }

    }

}

**Buzz Number: -**

import java.util.\*;

class BuzzNum {

    Scanner sc = new Scanner(System.in);

    int number, remainNumber;

    void numBuzz() {

        System.out.print("Enter number to check if it is a Buzz number or not: ");

        // Check if the next token is an integer

        if (sc.hasNextInt()) {

            number = sc.nextInt();

            if (number > 0) {

                remainNumber = number % 10;

                if (remainNumber == 7 || (number % 7 == 0)) {

                    System.out.println("It's a Buzz Number!");

                } else {

                    System.out.println("It's not a Buzz Number!");

                }

            } else {

                System.out.println("Please enter a valid positive number!");

            }

        } else {

            System.out.println("Please enter a valid integer number!");

            // Consume invalid input to avoid infinite loop

            sc.next();

        }

    }

}

class Buzz {

    public static void main(String[] args) {

        BuzzNum bn = new BuzzNum();

        bn.numBuzz();

    }

}

**Factorial Number: -**

import java.util.\*;

class GetFactorial {

    Scanner sc = new Scanner(System.in);

    int number, fact = 1;

    GetFactorial() {

        System.out.print("Enter a value to calculate its Factorial :");

        number = sc.nextInt();

        for (int i = 1; i <= number; i++) {

            fact = fact \* i;

        }

        System.out.println("Number is " + number + " and its Factorial is " + fact);

    }

}

class Factorial {

    public static void main(String[] args) {

new GetFactorial();

    }

}

**Factor Number: -**

import java.util.\*;

class GetFactor {

    Scanner sc = new Scanner(System.in);

    int number;

    GetFactor() {

        System.out.print("Enter value for getting its Factors : ");

        number = sc.nextInt();

        System.out.print("\nFactors of " + number + " : ");

        for (int i = 1; i <= number; ++i) {

            if (number % i == 0) {

                System.out.print(i + " ");

            }

        }

    }

}

class Factor {

    public static void main(String[] args) {

       new GetFactor();

    }

}

**Prime Number: -**

import java.util.\*;

class PrimeNumber {

    int flag = 0, squareNumber;

    PrimeNumber() {

        Scanner sc = new Scanner(System.in);

        System.out.println("Enter a number to check whether it is prime number or not : ");

        int numberToBecheck = sc.nextInt();

        sc.close();

        squareNumber = numberToBecheck / 2;

        if (numberToBecheck == 0 || numberToBecheck == 1) {

            System.out.println(numberToBecheck + " is not Prime Number!");

        } else {

            for (int i = 2; i <= squareNumber; i++) {

                if (numberToBecheck % i == 0) {

                    System.out.println(numberToBecheck + " is not Prime Number!");

                    flag = 1;

                    break;

                }

            }

            if (flag == 0) {

                System.out.println(numberToBecheck + " is Prime Number!");

            }

        }

    }

}

class Prime {

    public static void main(String[] args) {

        new PrimeNumber();

    }

}

**Duck Number: -**

import java.util.\*;

class DuckNumber {

    Scanner sc = new Scanner(System.in);

    int numberToBeCheck, originalNumber, flag = 0;

    DuckNumber() {

        System.out.println("Enter a number to check that number is Duck Number or not : ");

        numberToBeCheck = sc.nextInt();

        originalNumber = numberToBeCheck;

        if (numberToBeCheck > 0) {

            while (numberToBeCheck != 0) {

                if (numberToBeCheck % 10 == 0) {

                    flag = 1;

                    break;

                }

                numberToBeCheck /= 10;

            }

            if (originalNumber > 0 && flag == 1) {

                System.out.println("Number is Duck Number!");

            } else {

                System.out.println("Number is not Duck Number!");

            }

        } else {

            System.out.println("Please enter positive number!");

        }

    }

}

class Duck {

    public static void main(String[] args) {

        new DuckNumber();

    }

}