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File Handling

Implement a program for maintaining a database of student records using Files.

Student has Student\_id,name,Roll\_no, Class, marks and address. Display the data for few

students.

i) Create Database

ii)Display Database

iii) Delete Records

iv) Update Record

v)Search Record

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import java.util.Scanner;

import java.io.\*;

public class Student1 {

static BufferedReader br = new BufferedReader(new InputStreamReader(System.in));

String studentname; //name of student

int rollno, mob\_no; //roll number and mobile number

float marks;//marks

//method to create a new file

void create() {

try {

File file = new File("Student.txt");

//File named Student.txt is created

boolean x = file.createNewFile();

if (x) {

System.out.println("File has been created successfully! ");

//Message of successful creation after new file is created

} else {

System.out.println("File already present");

//message if file already exists

}

} catch (IOException e) {

System.out.println("Exception Occurred:");

}

try {

PrintWriter pw = new PrintWriter(new BufferedWriter(new FileWriter("Student.txt", true)));

int x = 1;

do {

Scanner sc = new Scanner(System.in);

int y;

//take input from user for name,roll no and mobile no.

System.out.print("\nEnter Student Name: ");

studentname = br.readLine();

System.out.print("Student Roll no: ");

rollno = Integer.parseInt(br.readLine());

System.out.print("Mobile Number: ");

mob\_no = Integer.parseInt(br.readLine());

System.out.print("Marks : ");

marks = Float.parseFloat(br.readLine());

//display student data

pw.println(studentname + "\t" + rollno + "\t" + marks + "\t" + mob\_no);

System.out.println("Do you want to enter more records? \n1) Yes\n2) No");

y = sc.nextInt();

if(y == 2) {

x = 0;

}

}while(x==1); //loop to add more records

pw.close();

}catch(IOException e) {

System.out.println(e);

}

}

void display() {

try {

// Open the file

BufferedReader file = new BufferedReader(new FileReader("Student.txt"));

String name;

int i = 1;

// Read records from the file

while ((name = file.readLine()) != null) {

System.out.println(name);

System.out.println("");

}

file.close();

} catch (FileNotFoundException e) {

System.out.println("\nERROR : File not Found !!!");

}catch(IOException e) {

System.out.println(e);

}

}

void search() {

try {

// Open the file

BufferedReader file = new BufferedReader(new FileReader("Student.txt"));

String name;

int flag = 0;

Scanner sc = new Scanner(System.in);

System.out.print("Enter an id of the student you want to search: ");

String searchname = sc.next();

// Read records from the file

while ((name = file.readLine()) != null) {

String[] line = name.split("\t");

//System.out.println(line[0]);

if (searchname.equalsIgnoreCase(line[1])) {

System.out.println("Record found");

System.out.println(name);

System.out.println("");

flag = 1;

break;

}

}

if (flag == 0)

System.out.println("Record not found");

file.close();

} catch (FileNotFoundException e) {

System.out.println("\nERROR : File not Found !!!");

}catch (IOException e) {

System.out.println(e);

}

}

void clearRecords() {

// Create a blank file

try {

PrintWriter pw = new PrintWriter(new BufferedWriter(new FileWriter("Student.txt")));

pw.close();

System.out.println("\nAll Records cleared successfully !");

for (int i = 0; i < 999999999; i++);

}catch (IOException e) {

System.out.println(e);

}

}

void modify() {

try {

// Open the file

BufferedReader file1 = new BufferedReader(new FileReader("Student.txt"));

PrintWriter pw = new PrintWriter(new BufferedWriter(new FileWriter("Student.txt", true)));

String name;

int flag = 0;

Scanner sc = new Scanner(System.in);

System.out.print("Enter the name of the student you want to update: ");

String searchname = sc.next();

// Read records from the file

while ((name = file1.readLine()) != null) {

String[] line = name.split("\t");

System.out.println(line[0]);

if (!searchname.equalsIgnoreCase(line[0])) {

pw.println(name);

flag = 0;

} else {

System.out.println("Record found");

System.out.println("Enter updated marks:");

String up\_mark = sc.next();

pw.println(line[0] + "\t" + line[1] + "\t" + up\_mark+ "\t" + line[3]);

flag = 1;

}

}

file1.close();

pw.close();

File delName = new File("Student.txt");

File oldName = new File("StudentDb.txt");

File newName = new File("Student.txt");

if (delName.delete())

System.out.println("record updated successfully");

else

System.out.println("Error");

if (oldName.renameTo(newName))

System.out.println("Renamed successfully");

else

System.out.println("Error");

} catch (FileNotFoundException e) {

System.out.println("\nERROR : File not Found !!!");

}catch (IOException e) {

System.out.println(e);

}

}

void delete() {

File file = new File("Student.txt");

if (file.delete()) {

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

} else {

System.out.println("Delete failed: File didn't delete");

}

}

public static void main(String[] args) {

// TODO Auto-generated method stub

Student1 s = new Student1();

int x = 1;

int ch;

Scanner sc = new Scanner(System.in);

do {

System.out.println("\n\n1. Create Database" + "\n2. Display Database" + "\n3. Search Records" + "\n4. Modify Records" + "\n5. Clear Records" + "\n6. Delete file" + "\n7. Exit");

System.out.println("Enter Choice:: ");

ch = sc.nextInt();

switch(ch) {

case 1:

s.create();

// s.write();

break;

case 2:

s.display();

break;

case 3:

s.search();

break;

case 4:

s.modify();

break;

case 5:

s.clearRecords();

break;

case 6:

s.delete();

break;

case 7:

x = 1;

break;

default:

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

} }while(x==1);

}

}

**//OUTPUT**

1. Create Database

2. Display Database

3. Search Records

4. Modify Records

5. Clear Records

6. Delete file

7. Exit

Enter Choice::

1

File has been created successfully!

Enter Student Name: Prathamesh Gadekar

Student Roll no: 14

Mobile Number: 702023

Marks : 85

Do you want to enter more records?

1) Yes

2) No

1

Enter Student Name: Om Tandale

Student Roll no: 65

Mobile Number: 702021

Marks : 86

Do you want to enter more records?

1) Yes

2) No

1

Enter Student Name: Anagh Adgale

Student Roll no: 66

Mobile Number: 7020236

Marks : 88

Do you want to enter more records?

1) Yes

2) No

1

Enter Student Name: Parjanya BHuse

Student Roll no: 7

Mobile Number: 702569

Marks : 98

Do you want to enter more records?

1) Yes

2) No

1

Enter Student Name: Jagdhish Kalokhe

Student Roll no: 22

Mobile Number: 45698

Marks : 99

Do you want to enter more records?

1) Yes

2) No

2

1. Create Database

2. Display Database

3. Search Records

4. Modify Records

5. Clear Records

6. Delete file

7. Exit

Enter Choice::

2

Prathamesh Gadekar 14 85.0 702023

Om Tandale 65 86.0 702021

Anagh Adgale 66 88.0 7020236

Parjanya BHuse 7 98.0 702569

Jagdhish Kalokhe 22 99.0 45698

1. Create Database

2. Display Database

3. Search Records

4. Modify Records

5. Clear Records

6. Delete file

7. Exit

Enter Choice::

3

Enter an id of the student you want to search: 14

Record found

Prathamesh Gadekar 14 85.0 702023

1. Create Database

2. Display Database

3. Search Records

4. Modify Records

5. Clear Records

6. Delete file

7. Exit

Enter Choice::

4

Enter the name of the student you want to update: 7

Prathamesh Gadekar

Om Tandale

Anagh Adgale

Parjanya BHuse

Jagdhish Kalokhe

record updated successfully

Error

1. Create Database

2. Display Database

3. Search Records

4. Modify Records

5. Clear Records

6. Delete file

7. Exit

Enter Choice::

5

All Records cleared successfully !

1. Create Database

2. Display Database

3. Search Records

4. Modify Records

5. Clear Records

6. Delete file

7. Exit

Enter Choice::

6

Student.txt is deleted!

1. Create Database

2. Display Database

3. Search Records

4. Modify Records

5. Clear Records

6. Delete file

7. Exit

Enter Choice::

7

1. Create Database

2. Display Database

3. Search Records

4. Modify Records

5. Clear Records

6. Delete file

7. Exit

Enter Choice::

7