Java Assignment 3

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AIML B3

Main.java File

```
import java.util.Scanner;

public class Main {
    public static void main(String[] args) {
        StudentFunction student = new StudentFunction();
int nextInt = -1;

        while (true) {
            System.out.println("Welcome to the student
dashboard");
            System.out.println("1. Add a Student");
            System.out.println("2. Display Students");
            System.out.println("3. Search by PRN");
            System.out.println("4. Exit");

Scanner in = new Scanner(System.in);

            do{
try {
                    System.out.print("Choose option [1..4]: ");
nextInt = Integer.parseInt(in.nextLine());
                } catch (NumberFormatException nfe) {
System.out.println("Error! Invalid integer value entered.");
}
             } while(!in.hasNextLine() || nextInt < 1 || nextInt >
4);


            switch (nextInt) {
case 1:
student.addStudent();
                    break;
case 2:
student.displayStudents();
                    break;
case 3:
student.searchByPrn();
```

```
                    break;
case 4:
                    System.exit(0);
                    break;
default:
                    System.out.println("Invalid choice. Please
enter a number between 1 and 4.");
            }
        }
    }
}
```

Student.java File

```
public class Student {
private String name;
private String prn;
private String dob;
private int marks;

    public Student(String name, String prn, String dob, int marks)
{
        this.name = name;
this.prn = prn;          this.dob
= dob;          this.marks =
marks;
    }
    public String getPrn() {
        return prn;
    }
    public String getName() {
return name;
    }

    public String getDob() {
return dob;
    }
    public int getMarks() {
        return marks;
    }
}
```

StudentFunctions.java File

```
import java.util.ArrayList;
import java.util.Scanner;
/**
```

```java
 * StudentFunction
 */
public class StudentFunction {
        ArrayList<Student> students = new ArrayList<Student>();
        Scanner scan = new Scanner(System.in);

        public void addStudent(){

                // Getting Name as Input
                    System.out.print("\nEnter Your Name:\t");
                    String name=scan.nextLine().trim();

                    // Getting PRN Number as Input
                    System.out.print("\nEnter Your PRN No.\t");
                    String prnNo=scan.nextLine().trim();

                    // Getting Date Of Birth as Input
                    System.out.print("\nEnter Your D.O.B\t");
                    String dateOfBirth=scan.nextLine().trim();

                    // Getting Marks Obtained as Input
                    System.out.print("\nEnter Your Marks\t");
                    Integer
marksObtained=Integer.parseInt(scan.next());

                    // Creating Object of Student Class with above
values
                    Student sObj=new
Student(name,prnNo,dateOfBirth,marksObtained);

                    // Adding Newly Created Student Object to
Array List
                    students.add(sObj);

         // Print Success Message After Adding Data
            System.out.println("\nData Added Succesfully !!! ");
        }

        public void displayStudents(){
for(Student student: students){
                System.out.println(student.getPrn());
                System.out.println(student.getName());
System.out.println(student.getDob());
                System.out.println(student.getMarks());
            }

        }
        public void searchByPrn() {
```

```
                System.out.println("Enter PRN to search:");
                String searchPrn = scan.nextLine();

                boolean found = false;                    for
(Student student : students) {                        if
(student.getPrn().equals(searchPrn)) {
System.out.println("Student Found:");
                        System.out.println("Name: " +
student.getName());
                        System.out.println("PRN: " +
student.getPrn());
                        System.out.println("DOB: " +
student.getDob());
                        System.out.println("Marks: " +
student.getMarks());
                        found = true;
                    }
                }

                if (!found) {
                    System.out.println("Student with PRN " +
searchPrn + " not found.");
                }

        }         public void

searchByName() {

            System.out.println("Enter PRN to search:");
            String searchPrn = scan.nextLine();

            boolean found = false;                for
(Student student : students) {                    if
(student.getName().equals(searchPrn)) {
System.out.println("Student Found:");
                    System.out.println("Name: " +
student.getName());
                    System.out.println("PRN: " +
student.getPrn());
                    System.out.println("DOB: " +
student.getDob());
                    System.out.println("Marks: " +
student.getMarks());
                    found = true;
                }
            }

            if (!found) {
                System.out.println("Student with PRN " + searchPrn
```

```
+ " not found.");
            }

    }


}
```