**STUDENT RECORD SYSTEM**

*(End Semester Project for Programming Practice 2)*

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**BHUBANESWAR, ODISHA, INDIA**

**2019**

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**1. PROBLEM STATEMENT**

Student record system is a elementary data base system which do the following work.

1. It displays a menu of different operations.

Example:

STUDENT RECORD SYSTEM

Enter your choice>

1. For creating a new record
2. For display records according to roll numbers
3. For deleting a record
4. For display student records in sorted sequence
5. For quit
6. It perform the following operation

* Insert a new record roll number wise.
* Delete a record according to its roll number.
* Display all records or a record.
* Sort the record.

**2. PROBLEM ANALYSIS**

This system aims to saves the time of the student and of the administrator. It includes process like registration of the student’s details, assigning the department based on their course and maintenance of the record.

This system reduces the cost and workforce required for this job. As the system is online the information is globally present to everyone. This makes the system easy to handle and feasible for finding the omission with updating at the same time.

As for the existing system, they use to maintain their record manually which makes it vulnerable to security. If filed a query to search or update in a manual system, it will take a lot of time to process the query and make a report which is a tedious job.

As the system used in the institute is outdated as it requires paper, files and the binders, which will require the human workforce to maintain them. To get registered in the institute, a student in this system one should come to the university.

Get the forms from the counter while standing in the queue which consumes a lot of the student’s time as well as of management team. As the number of the student increases in the institute manually managing the strength becomes a hectic job for the administrator.

This computerized system store all the data in the database which makes it easy to fetch and update whenever needed.

**3. ALGORITHM**

1. Start
2. Insert Records
3. Create Records
4. Enter name
5. Enter age
6. Enter roll no
7. Enter cgpa
8. Enter Branch
9. Enter sec
10. Enter college
11. Display Records according to roll no.
12. To Delete a record from the data
13. To display Student Record in Sorted Sequence
14. Quit

**4. IMPLEMENTATION**

import java.util.\*;

class data

{

String name;

int age;

int roll;

double cgpa;

String branch;

char sec;

String clg\_name;

data(String s,int a,int r,double cg,String br,char ss,String cl)

{

name = s;

age = a;

roll = r;

cgpa = cg;

branch = br;

sec = ss;

clg\_name = cl;

}

public void display()

{

System.out.println(name +" "+ age +" "+ roll +" "+ cgpa +" "+ branch +" "+ sec +" "+ clg\_name);

System.out.println();

}

}

class Student

{

int n;

data ar [];

Student(int l)

{

n=l;

ar = new data[n];

}

public void insert()

{

Scanner sc = new Scanner(System.in);

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

{

System.out.println("Enter name");

String n1 = sc.next();

System.out.println("Enter age");

int a = sc.nextInt();

System.out.println("Enter roll no");

int r = sc.nextInt();

System.out.println("Enter cgpa");

double d = sc.nextDouble();

System.out.println("Enter Branch");

String s = sc.next();

System.out.println("Enter Sec");

char c = sc.next().charAt(0);

System.out.println("Enter Collage Name");

String clg= sc.next();

ar[i] = new data(n1,a,r,d,s,c,clg);

}

}

public int find(data[] r,int R)

{

for(int i=0;i<r.length;i++)

{

if(r[i].roll == R)

return i;

}

return -1;

}

public void sortRoll()

{

for(int i=0;i<ar.length;i++)

{

for(int j=i+1;j<ar.length;j++)

{

if(ar[j].roll < ar[i].roll)

{

int temp = ar[i].roll;

ar[i].roll = ar[j].roll;

ar[j].roll = temp;

}

}

}

}

public void delete(int R)

{

int x = find(ar,R);

if(x!=-1)

{

if(x != ar.length-1)

{

ar[x] = null;

ar[x] = ar[x+1];

}

else

ar[x] = null;

}

else {

System.out.println("Roll no not Present in database");

}

}

public void sort()

{

String temp = "";

for(int i=0;i<ar.length;i++)

{

for(int j=i+1;j<ar.length;j++)

{

if(ar[i].name.compareTo(ar[j].name) > 0)

{

temp = ar[i].name;

ar[i].name = ar[j].name;

ar[j].name = temp;

}

}

}

}

}

public class project

{

public static void main(String[] args)

{

Scanner sc = new Scanner(System.in);

System.out.println("Enter the no of entries want to insert");

int n = sc.nextInt();

int ch;

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

System.out.println();

System.out.println("1: For Creating Record");

System.out.println("2: For Display Record according to Roll no");

System.out.println("3: For deleting a Record");

System.out.println("4: Display Student record in Sorted Sequence");

System.out.println("5: Quit");

ch = sc.nextInt();

Student b = new Student(n);

while(ch!=0)

{

switch(ch)

{

case 5:

System.exit(0);

break;

case 1:

b.insert();

break;

case 3:

if(b.ar[0]!=null) {

System.out.println("Enter roll no to be deleted");

int r = sc.nextInt();

b.delete(r);

n--;

}

else

System.out.println("No Elements to delete");

break;

case 4:

if(b.ar[0]!=null) {

b.sort();

for(int j=0;j<n;j++)

{

b.ar[j].display();

}

}

else

System.out.println("No Elements to Sort");

break;

case 2:

if(b.ar[0]!=null) {

b.sortRoll();

for(int j=0;j<n;j++)

{

b.ar[j].display();

}

}

else

System.out.println("No Elements to Display");

break;

}

System.out.println("Enter choice again");

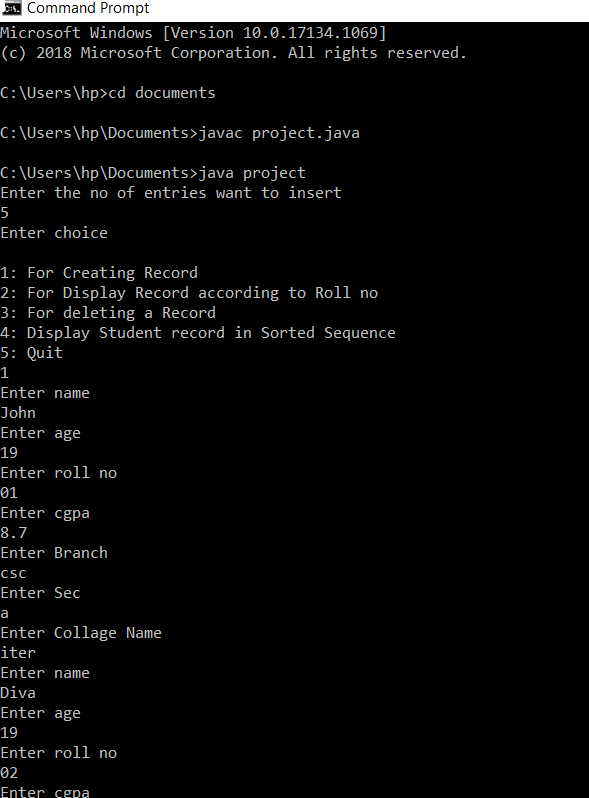
ch = sc.nextInt();

}

}

}

1. **Output**

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