Grade System Management in Java Program

A Documentation for the Final Project of CC12 and CC13

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ABSTRACT

This paper deals with the development, layout, and application of the final project which is a program that uses data structures and algorithms in solving programming problems, in partial fulfillment for the requirements of CC12: Computer Programming 2, and CC13: Data Structures and Algorithms. The selected project is to make a Grade System Management program that yields to the user specifically teachers and students, for the convenience of checking/ viewing and editing of a student's grade.

CCS Concepts

Applied Computing~Education~Computer Manage instruction

Keywords

Grade, System, Program, Management

1. INTRODUCTION

Overview

As a group, we decided to create a simple program that can help both the teachers and students. The program we created is a database for the grades of the students, where the teacher can input and edit. In which to identify the user we implemented an account feature where the user can Sign up, Login, or Logout for it to identify if the user is a student or teacher.

Objective

The objective is to run properly for it to be able to help the student access their grades and teachers who wish to record the scores of the students virtually. Our aim is to make this program in order for both teacher and student use it with ease.

Scope and Limitations

The program is Limited to the user's input and data input. The account system is limited, which it can only accompany 50 students and 10 teachers. It is limited to the students' grades which means it does not involve the student's attendance and behavior in class. Logical miscalculations of the program.

Functionalities

Some of the functions that this program offers are; an account feature where the user can signup and input his/her account for the program, then the login/logout part for the user to access his/her account. After that he/she can view his/her grades if the user is a student, which only the teacher can edit. This list is the simplified functions:

- Login and Logout of users
- Sign-up
- Input, view, and edit of grades
- Data storage

2. PROGRAM DESIGN AND IMPLEMENTATION

Pseudocode

```
Do loop
Initialize "menu" if menu choice
        Is login
                Run function login
                        User will input
                                If teacher

(logname,logpass)
                                                If
userinput

(viewstudents)

        Run function print mystudents()

(editgrades)

        Run function (userinput) addsubjectGrade()
                                If student

(logname,logpass)
```

If

userinput

(viewgrades)

Run function print mysubjects()

Is signup

Run function signup

User will input

Signup

If teacher

(Signname ,Signpass,Signsubject)

If student

(Signname ,Signpass)

Else loop back to initialization of menu

End of loop

Data Structures and Algorithms Discussion with Code Snippets

Adding Students

```
public class AddStudent{
    int a = 0, column = 3,z = 0;
    String [][] list = new String [50][3];
    String [] slist = new String [50];
    int [][] gradelist = new int [50][1];
    public String [][] addStudent(String name, String pass){
        list[a][0] = name;
        list[a][1] = pass;
        a++;
        return list;
    }

    public String[][] addstudentSubject(String [][] slist, int num){
        slist [num][0]  =  "English";
        slist [num][1]  =  "Math";
        slist [num][2]  =  "Science";
        slist [num][3]  =  "PE";
        slist [num][4]  =  "Filipino";
        slist [num][5]  =  "RS";
        slist [num][6]  =  "History";
        slist [num][7]  =  "Business";
        slist [num][8]  =  "Music and Arts";
        slist [num][9]  =  "Homeroom";
        return slist;
    }
```

```
    public int [][] addsubjectGrade(int [][] list, int grade, int number){
        gradelist[number][1] = grade;
        return list;
    }

    public String [] addStudents(String name){
        slist[z] = name;
        z++;
        return slist;
    }


    public String[] myStudents(String[][] list, String[] students){
        for(int h = 0; h < 50; h++){
            students[h] = "Empty";
        }
        for(int h = 0; h < 50; h++){
            students[h] =  list[h][0];
        }
        return students;
    }
}
```

Display

```
public void printMenu(){
    System.out.println("Welcome to the School's Grading System");
    System.out.println();
    System.out.println("Choose Action: 1 for Sign-up | 2 for Login ");
    System.out.print("Choice: ");
}
public int printSignup(){
    System.out.println();
    System.out.println("Sign-up");
    System.out.println("Choose: 1 for Teacher | 2 for Student ");
    System.out.print("Choice: ");
    int sch = z.nextInt();
    System.out.println();
    return sch;
}

public String printSignname(){
    z.nextLine();
    System.out.print("Enter Name: ");
    String stname = z.nextLine();
    System.out.println();
    return stname;

}

public String printSignpass(){
    System.out.print("Enter Password(Letters): ");
    String spass = z.nextLine();
    System.out.println();
    return spass;
}

public String printSignsubj(){
    System.out.print("Enter Subject: ");
    String tsubj = z.nextLine();
    System.out.println();
    return tsubj;
}
public void printdoneSign(){
    System.out.println("Thank you for Signing-up!");
    System.out.println("Please Login again.");
    System.out.println("------End------");
    System.out.println("Welcome to the School's Grading System");
    System.out.println();
    System.out.println("Choose Action: 1 for Sign-up | 2 for Login ");
    System.out.print("Choice: ");
}
```

Adding Teacher

```
public class AddTeacher{
    int a = 0, column = 3;
    String [][] list = new String [10][3];
    public String [][] addTeacher(String name, String pass, String subj){
        list[a][0] = name;
        list[a][1] = pass;
        list[a][2] = subj;
        a++;
        return list;
    }
}
```

3. CONCLUSION

In conclusion, the program main function is to record, edit, and view the grades of the students. The program is slightly similar to slmis but it's limited only to Grading System.

4. REFERENCES

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5. APPENDICES

APPENDICES

Project Proposal

Overview

- **Project background and Description**

  Our project is a game which is Tetris. Basically, it has the same concept and mechanics as the original one. Our aim for this program is to create a program that is SIMILAR to the famous original tetris game, where the player can see their progress or scoreboard. After the player finishes playing his/her final score is shown after the game.
- **Features and Functionalities**
  - ❖ Recording score
  - ❖ Printing the total score
  - ❖ Rotation of pieces
  - ❖ Timer for each piece to spawn
  - ❖ Piece drop delay (0.5 seconds)
  - ❖ Shows the next piece that will spawn
- **Possible Data Structure and Algorithm to be used**
  - ■ Arrays
  - ■ Stack
  - ■ Queue

APPROVAL TO PROCEED

I/We approve this project and give full authorization to the team to allow it to proceed.

Names:	**Titles:**
Sidnel Gramata	Leader
Kurt Montilla	Member
Vladimir Alfid Fabe	Member

Approved by: Date Signed:_____

_____

_____

Photo Documentation/Program Screenshots

```
Choose: 1 for Teacher | 2 for Student
Choice: 1

Enter Name: sod

Enter Password(Letters): nel

1 English
2 Math
3 Science
4 PE
5 Filipino
6 RS
7 History
8 Business
9 Music and Arts
10 Homeroom
Enter Subject: Eblish
```

```
C:\Users\budzf\OneDrive\Desktop\Finals final>javac Foundation.java

C:\Users\budzf\OneDrive\Desktop\Finals final>java Foundation
Welcome to the School's Grading System

Choose Action: 1 for Sign-up | 2 for Login
Choice: 1

Sign-up
Choose: 1 for Teacher | 2 for Student
Choice: 2

Enter Name: bu

Enter Password(Letters): dz

Thank you for Signing-up!
Please Login again.
```