

Name: Zacharie Happel

CST141-FA2023

Project for Week 04

Due: 10/01/2023

## Source Code for All 5 Classes:

### CollegeCoursesMain.java

```
package cst141.projects.projectfour;

public class CollegeCoursesMain {

    public static void main (String[] args) {
        Course courseCST141 = new Course("CST141", "95537", 4);
        CourseTeacher courseCST141Teacher = new CourseTeacher("Prof. H.", "631-548-2691", "hassile", true);
        CourseStudent[] courseCST141Student = new CourseStudent[5];
        //
        courseCST141Student[0] = new CourseStudent("Sally", "631-555-1111", "sally01", true, true, "CST");
        courseCST141Student[1] = new CourseStudent("Mohammed", "631-555-2222", "moham56", true, true, "CST");
        courseCST141Student[2] = new CourseStudent("Alex", "631-555-3333", "alex93", false, false, "N/A");
        courseCST141Student[3] = new CourseStudent("Barbara", "631-555-4444", "barba28", true, false, "GenStud");
        courseCST141Student[4] = new CourseStudent("Monique", "631-555-5555", "moniq71", true, true, "CST");

        System.out.println("\nWritten by Zacharie Happel\n");

        System.out.println("Course Info: ");
        courseCST141.printInfo();
        System.out.println("\nTeacher Info: ");
        courseCST141Teacher.printInfo();
        System.out.println("\nCourse Info: ");

        for (int i = 0; i <= courseCST141Student.Length - 1; i++) {
            System.out.print("Student #" + i + " ");
            courseCST141Student[i].printInfo();
        }
    }
}
```

## CoursePerson.java

```
package cst141.projects.projectfour;

public abstract class CoursePerson {

    protected String fullName;
    protected String phoneNumber;
    protected String userName;

    public CoursePerson() {
        fullName = "";
        phoneNumber = "";
        userName = "";
    }

    public CoursePerson(
        String theFullName,
        String thePhoneNumber,
        String theUserName) {
        fullName = theFullName;
        phoneNumber = thePhoneNumber;
        userName = theUserName;
    }

    public String getFullName () { return fullName;}
    public String getPhoneNumber () { return phoneNumber; }
    public String getUserName () { return userName; }

    abstract void printInfo();
    abstract String getEmailAddress();
}
```

## CourseStudent.java

```
package cst141.projects.projectfour;

public class CourseStudent extends CoursePerson{

    private Boolean matriculated;
    private Boolean fullTime;
    private String programOfStudy;

    public CourseStudent() {
        super(); // call default constructor of parent class
        matriculated = false;
        fullTime = false;
        programOfStudy = "";
    }

    public CourseStudent(
        String theFullName,
        String thePhoneNumber,
        String theUserName,
        Boolean theMatriculated,
        Boolean theFullTime,
        String theProgramOfStudy) {
        super(theFullName, thePhoneNumber, theUserName);
        matriculated = theMatriculated;
        fullTime = theFullTime;
        programOfStudy = theProgramOfStudy;
    }

    public Boolean getMatriculated() { return matriculated; }
    public Boolean getFullTime() { return fullTime; }
    public String getProgramOfStudy() { return programOfStudy; }

    @Override public void printInfo() {
        System.out.println(
            "Name: " + super.getFullName() +
            ", Phone Number: " + super.getPhoneNumber() +
            ", User Name: " + super.getUserName() +
            ", Matriculated: " + matriculated +
            ", Full Time: " + fullTime +
            ", Program of Study: " + programOfStudy +
            ", Email: " + getEmailAddress()
        );
    }

    @Override public String getEmailAddress() {
        return (super.getUserName()).concat("@mail.sunysuffolk.edu");
    }
}
```

## CourseTeacher.java

```
package cst141.projects.projectfour;

public class CourseTeacher extends CoursePerson {

    private Boolean fullTime;

    public CourseTeacher() {
        super();
        fullTime = false;
    }

    public CourseTeacher(
        String theFullName,
        String thePhoneNumber,
        String theUserName,
        boolean theFullTime) {
        super(theFullName, thePhoneNumber, theUserName);
        fullTime = theFullTime;
    }

    public Boolean getFullTime() { return fullTime; }

    @Override public void printInfo() {
        System.out.println(
            "Name: " + super.getFullName() +
            ", Phone Number: " + super.getPhoneNumber() +
            ", User Name: " + super.getUserName() +
            ", Full Time: " + fullTime +
            ", Email: " + getEmailAddress()
        );
    }

    @Override public String getEmailAddress() {
        return (super.getUserName()).concat("@mail.sunysuffolk.edu");
    }
}
```

## Course.java

```
package cst141.projects.projectfour;

public class Course {
    private String courseNumber;
    private String CRN;
    private int numberOfCredits;

    public Course () { }

    public Course (String theCourseNumber, String theCRN, int theNumberOfCredits) {
        courseNumber = theCourseNumber;
        CRN = theCRN;
        numberOfCredits = theNumberOfCredits;
    }

    public String getCourseNumber () { return courseNumber; }
    public String getCRN () { return CRN; }
    public int getNumberOfCredits () { return numberOfCredits; }

    public void printInfo () {
        System.out.println(
            "Course Number: " + courseNumber +
            ", CRN: " + CRN +
            ", Number of Credits: " + numberOfCredits
        );
    }
}
```

## Screenshots from Output:

### Compilation

```
zkhap@DESKTOP-3PU20RT MINGW64 ~/Documents/SUNY Suffolk/Principles of Computing with Java/git/CST141/Projects/ProjectFour (main)
$ javac ./CoursePerson.java ./CourseTeacher.java ./CourseStudent.java ./Course.java ./CollegeCoursesMain.java

zkhap@DESKTOP-3PU20RT MINGW64 ~/Documents/SUNY Suffolk/Principles of Computing with Java/git/CST141/Projects/ProjectFour (main)
$ |
```

### Output

```
zkhap@DESKTOP-3PU20RT MINGW64 ~/Documents/SUNY Suffolk/Principles of Computing with Java/git
$ java cst141.projects.projectfour.CollegeCoursesMain

Written by Zacharie Happel

Course Info:
Course Number: CST141, CRN: 95537, Number of Credits: 4

Teacher Info:
Name: Prof. H., Phone Number: 631-548-2691, User Name: hassile, Full Time: true, Email: hassile@mail.sunysuffolk.edu

Course Info:
Student #0 Name: Sally, Phone Number: 631-555-1111, User Name: sally01, Matriculated: true, Full Time: true, Program of Study: CST, Email: sally01@mail.sunysuffolk.edu
Student #1 Name: Mohammed, Phone Number: 631-555-2222, User Name: moham56, Matriculated: true, Full Time: true, Program of Study: CST, Email: moham56@mail.sunysuffolk.edu
Student #2 Name: Alex, Phone Number: 631-555-3333, User Name: alex93, Matriculated: false, Full Time: false, Program of Study: N/A, Email: alex93@mail.sunysuffolk.edu
Student #3 Name: Barbara, Phone Number: 631-555-4444, User Name: barba28, Matriculated: true, Full Time: false, Program of Study: GenStud, Email: barba28@mail.sunysuffolk.edu
Student #4 Name: Monique, Phone Number: 631-555-5555, User Name: moniq71, Matriculated: true, Full Time: true, Program of Study: CST, Email: moniq71@mail.sunysuffolk.edu
```

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I certify that the above work is my own. I did not copy work from the Internet or from a classmate. This project will count as part of my grade for the course.