ASSIGMENT-1 OOP JAVA

REEYAN AFZAL KHAN
CS120192059 - BSC(A)

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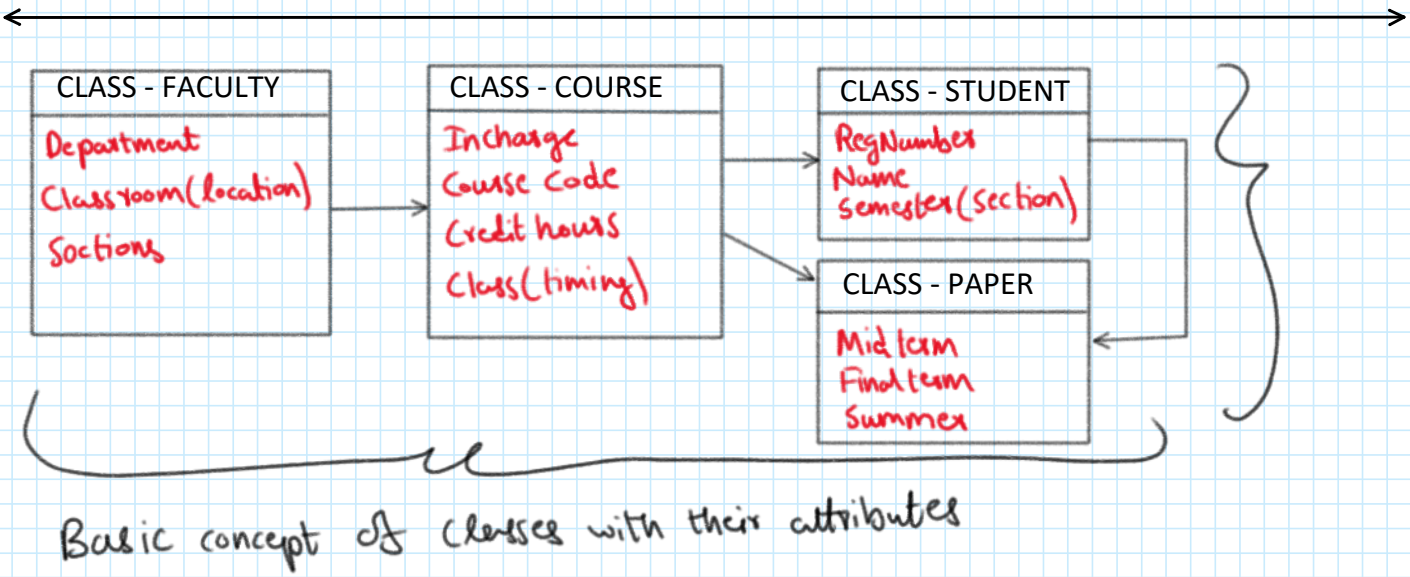
Q5) Can you write an analysis for a simple Exam Management System? Classes are Student, Course, Paper, and Faculty. Think about what instance variables and methods you should define for each of these classes. You can start by drawing a UML diagram of the classes. What additional classes do you think can be added to the system. (This part can be submitted handwritten or typed)

Given data:-

Exam Management System:

- Faculty
- Course
- Student
- Paper

these following are the classes having (each) different attributes which makes them different from one another. However, in this case it wouldn't be wrong to mention that they depend on each other



Basic concept of classes with their attributes

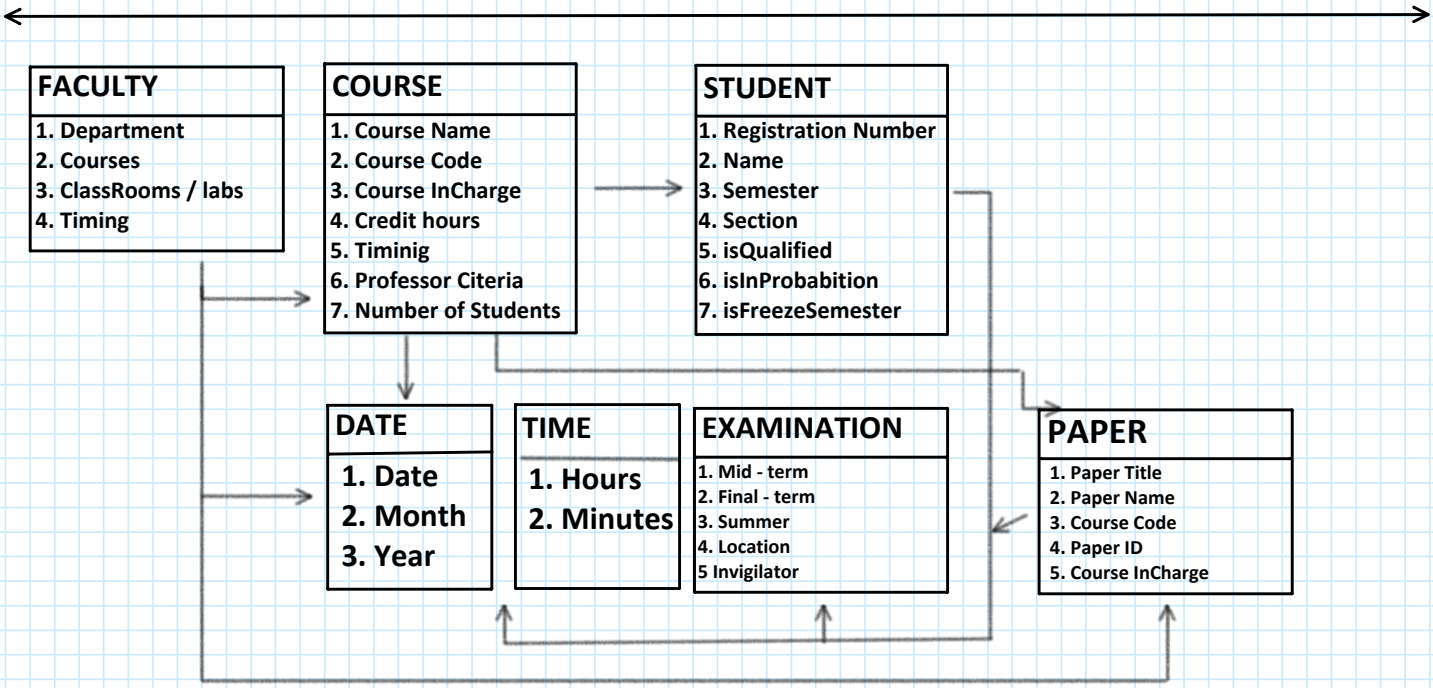
CONCEPT: faculty → course → student → paper

The faculty could provide the specific course to the specific **Department** and also arrange **Timing**

That course is going to be assigned to the **professor** with some attributes along with that he/she could also set the score citiria for the **Paper**

The student is going to pick that course if he/she is qualified for that course

Paper according to the term - final or mid or in case of reappear - summer



FacultyClass Methods

- setDepartment(String)
- setCourse(CourseClass)
- setClassroom(String)
- setTiming(DateTime)

//Getters

- getDepartment()
- getCourse()
- getClassroom()
- getTiming()

CourseClass Methods

- setCourseName(String)
- setCourseCode(String)
- setCourseInCharge(String)
- setCreditHours(int)
- setTiming(DateTime)
- setPC(int)
- setNumofStudents(int)

//Getters

- getCourseName()
- getCourseCode()
- getCourseInCharge()
- getCreditHours()
- getTiming()
- getPC()
- getNumofStudents()

StudentClass Methods:

- setRegNumber(int)
- setName(String)
- setSemester(String)
- setSection(String)
- setisQualified(boolean)
- setInProbabition(boolean)
- setisFreezeSemester(boolean)

//Getters

- getRegNumber()
- getName()
- getSemester()
- getSection()
- getisQualified()
- getInProbabition()
- getisFreezeSemester()

Date Methods

- Public Date(int date, int month, int year)
- toString() { String.format("%d/%d/%d"), Date, Month, Year}

Time Methods

- Public Time(int hours, int minutes)
- toString() { String.format("%d:%d"), Hours, Minutes}

PaperClass Methods:

- setPaperTitle(String)
- setPaperName(String)
- setCourseCode(int)
- setPaperID(int)
- setCourseInCharge(CourseClass.setCourseInCharge)

//Getters

- getPaperTitle()
- getPaperName()
- getCourseCode()
- getPaperID()
- getCourseInCharge()

Examination Methods

- setMidterm(PaperClass)
- setFinalterm(PaperClass)
- setSummer(PaperClass)
- setLocation(String)
- setInvigilator(String)