DayCare Management System

Team members:

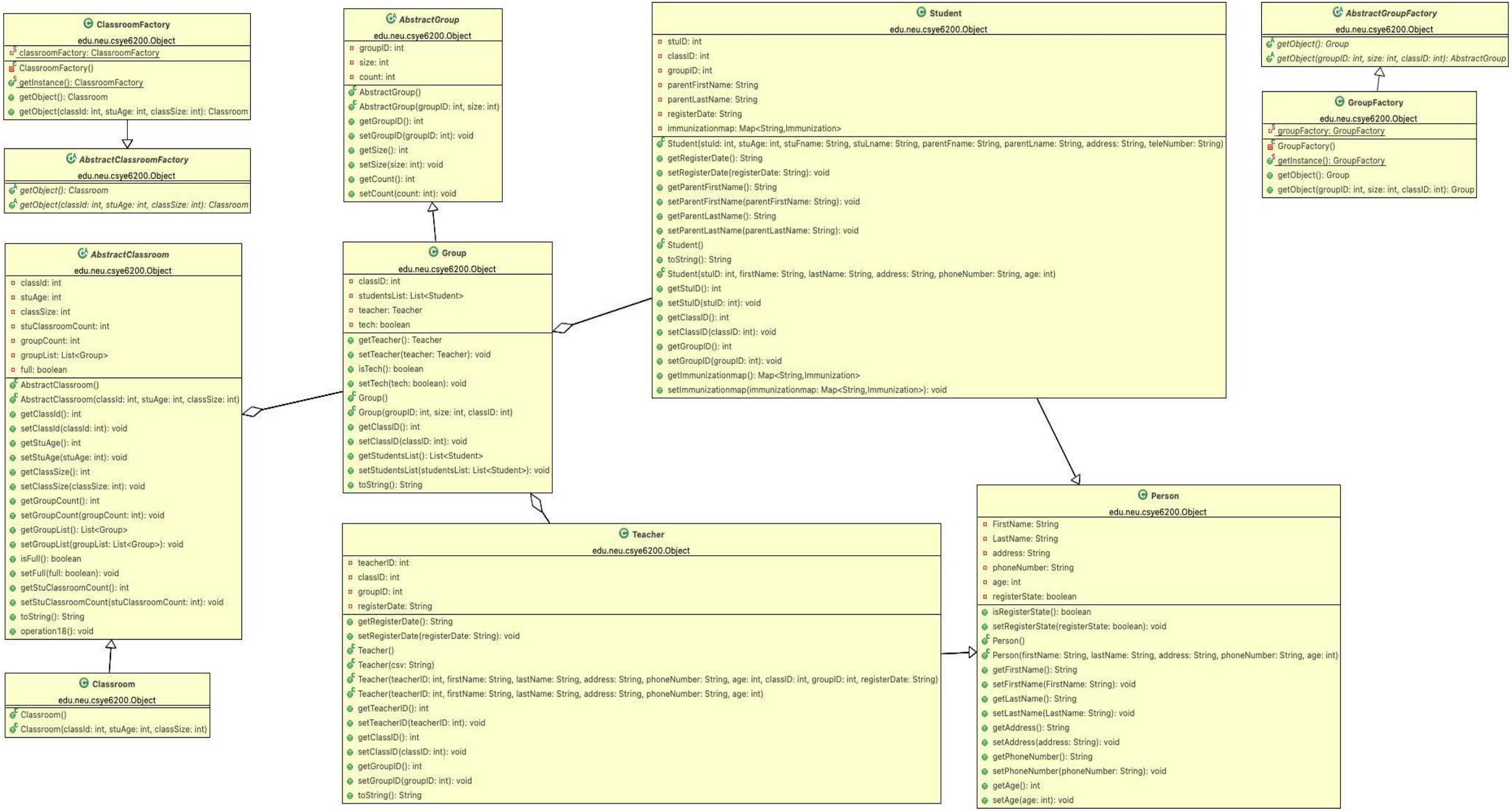
Shuting Dai

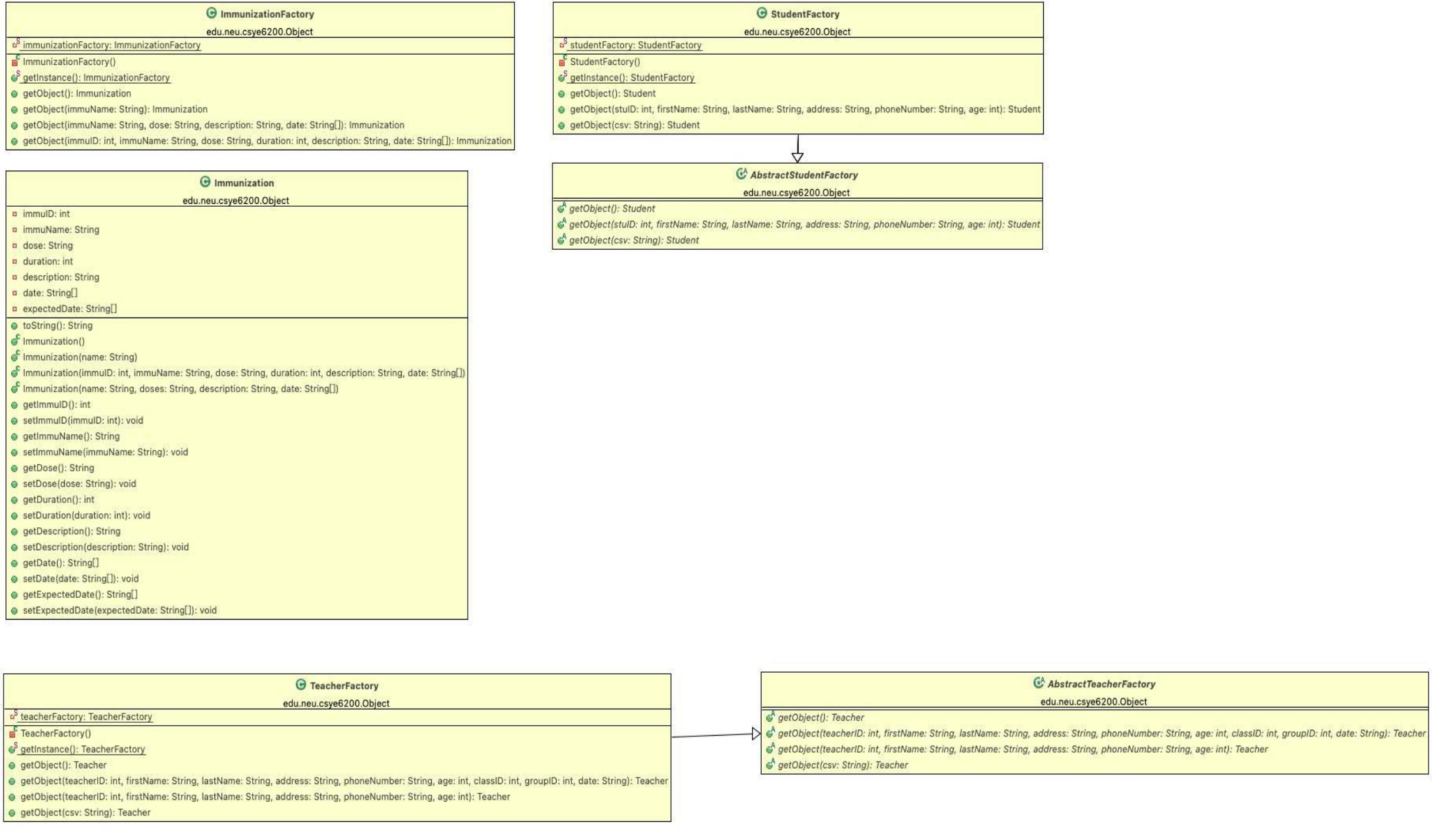
Qiushi Zhang

Yining Chen

Technology

- CSV
- Factory Design Pattern
- Object Oriented Design: Inheritance, Polymorphism, Abstraction, Encapsulation
- Exception
- UML
- S.O.L.I.D
- Java Swing
- File System


ClassroomFactory
edu.neu.csye6200.Object
classroomFactory: ClassroomFactory
ClassroomFactory()
getInstance(): ClassroomFactory
getObject(): Classroom
getObject(classId: int, stuAge: int, classSize: int): Classroom
AbstractClassroomFactory
edu.neu.csye6200.Object
getObject(): Classroom
getObject(classId: int, stuAge: int, classSize: int): Classroom
AbstractGroup
edu.neu.csye6200.Object
groupID: int
size: int
count: int
AbstractGroup()
AbstractGroup(groupID: int, size: int)
getGroupID(): int
setGroupID(groupID: int): void
getSize(): int
setSize(size: int): void
getCount(): int
setCount(count: int): void
Student
edu.neu.csye6200.Object
stuID: int
classID: int
groupID: int
parentFirstName: String
parentLastName: String
registerDate: String
immunizationmap: Map<String,Immunization>
Student(stuId: int, stuAge: int, stuFname: String, stuLname: String, parentFname: String, parentLname: String, address: String, teleNumber: String)
getRegisterDate(): String
setRegisterDate(registerDate: String): void
getParentFirstName(): String
setParentFirstName(parentFirstName: String): void
getParentLastName(): String
setParentLastName(parentLastName: String): void
Student()
toString(): String
Student(stuID: int, firstName: String, lastName: String, address: String, phoneNumber: String, age: int)
getStuID(): int
setStuID(stuID: int): void
getClassID(): int
setClassID(classID: int): void
getGroupID(): int
setGroupID(groupID: int): void
getImmunizationmap(): Map<String,Immunization>
setImmunizationmap(immunizationmap: Map<String,Immunization>): void
AbstractGroupFactory
edu.neu.csye6200.Object
getObject(): Group
getObject(groupID: int, size: int, classID: int): AbstractGroup
GroupFactory
edu.neu.csye6200.Object
groupFactory: GroupFactory
GroupFactory()
getInstance(): GroupFactory
getObject(): Group
getObject(groupID: int, size: int, classID: int): Group
AbstractClassroom
edu.neu.csye6200.Object
classId: int
stuAge: int
classSize: int
stuClassroomCount: int
groupCount: int
groupList: List<Group>
full: boolean
AbstractClassroom()
AbstractClassroom(classId: int, stuAge: int, classSize: int)
getClassId(): int
setClassId(classId: int): void
getStuAge(): int
setStuAge(stuAge: int): void
getClassSize(): int
setClassSize(classSize: int): void
getGroupCount(): int
setGroupCount(groupCount: int): void
getGroupList(): List<Group>
setGroupList(groupList: List<Group>): void
isFull(): boolean
setFull(full: boolean): void
getStuClassroomCount(): int
setStuClassroomCount(stuClassroomCount: int): void
toString(): String
operation18(): void
Group
edu.neu.csye6200.Object
classID: int
studentsList: List<Student>
teacher: Teacher
tech: boolean
getTeacher(): Teacher
setTeacher(teacher: Teacher): void
isTech(): boolean
setTech(tech: boolean): void
Group()
Group(groupID: int, size: int, classID: int)
getClassID(): int
setClassID(classID: int): void
getStudentsList(): List<Student>
setStudentsList(studentsList: List<Student>): void
toString(): String
Teacher
edu.neu.csye6200.Object
teacherID: int
classID: int
groupID: int
registerDate: String
getRegisterDate(): String
setRegisterDate(registerDate: String): void
Teacher()
Teacher(csv: String)
Teacher(teacherID: int, firstName: String, lastName: String, address: String, phoneNumber: String, age: int, classID: int, groupID: int, registerDate: String)
Teacher(teacherID: int, firstName: String, lastName: String, address: String, phoneNumber: String, age: int)
getTeacherID(): int
setTeacherID(teacherID: int): void
getClassID(): int
setClassID(classID: int): void
getGroupID(): int
setGroupID(groupID: int): void
toString(): String
Person
edu.neu.csye6200.Object
FirstName: String
LastName: String
address: String
phoneNumber: String
age: int
registerState: boolean
isRegisterState(): boolean
setRegisterState(registerState: boolean): void
Person()
Person(firstName: String, lastName: String, address: String, phoneNumber: String, age: int)
getFirstName(): String
setFirstName(FirstName: String): void
getLastName(): String
setLastName(LastName: String): void
getAddress(): String
setAddress(address: String): void
getPhoneNumber(): String
setPhoneNumber(phoneNumber: String): void
getAge(): int
setAge(age: int): void
Classroom
edu.neu.csye6200.Object
Classroom()
Classroom(classId: int, stuAge: int, classSize: int)

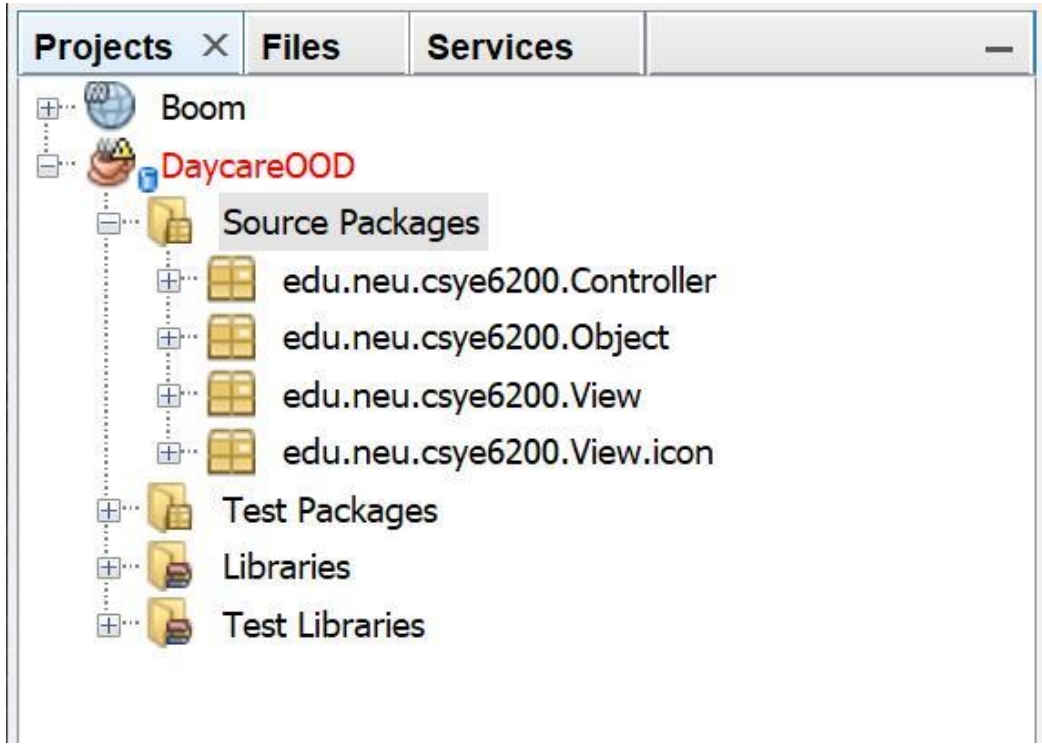

ImmunizationFactory
edu.neu.csye6200.Object
immunizationFactory: ImmunizationFactory
ImmunizationFactory()
getInstance(): ImmunizationFactory
getObject(): Immunization
getObject(immuName: String): Immunization
getObject(immuName: String, dose: String, description: String, date: String[]): Immunization
getObject(immuID: int, immuName: String, dose: String, duration: int, description: String, date: String[]): Immunization
StudentFactory
edu.neu.csye6200.Object
studentFactory: StudentFactory
StudentFactory()
getInstance(): StudentFactory
getObject(): Student
getObject(stuID: int, firstName: String, lastName: String, address: String, phoneNumber: String, age: int): Student
getObject(csv: String): Student
AbstractStudentFactory
edu.neu.csye6200.Object
getObject(): Student
getObject(stuID: int, firstName: String, lastName: String, address: String, phoneNumber: String, age: int): Student
getObject(csv: String): Student
Immunization
edu.neu.csye6200.Object
immuID: int
immuName: String
dose: String
duration: int
description: String
date: String[]
expectedDate: String[]
toString(): String
Immunization()
Immunization(name: String)
Immunization(immuID: int, immuName: String, dose: String, duration: int, description: String, date: String[])
Immunization(name: String, doses: String, description: String, date: String[])
getImmuID(): int
setImmuID(immuID: int): void
getImmuName(): String
setImmuName(immuName: String): void
getDose(): String
setDose(dose: String): void
getDuration(): int
setDuration(duration: int): void
getDescription(): String
setDescription(description: String): void
getDate(): String[]
setDate(date: String[]): void
getExpectedDate(): String[]
setExpectedDate(expectedDate: String[]): void
TeacherFactory
edu.neu.csye6200.Object
teacherFactory: TeacherFactory
TeacherFactory()
getInstance(): TeacherFactory
getObject(): Teacher
getObject(teacherID: int, firstName: String, lastName: String, address: String, phoneNumber: String, age: int, classID: int, groupID: int, date: String): Teacher
getObject(teacherID: int, firstName: String, lastName: String, address: String, phoneNumber: String, age: int): Teacher
getObject(csv: String): Teacher
AbstractTeacherFactory
edu.neu.csye6200.Object
getObject(): Teacher
getObject(teacherID: int, firstName: String, lastName: String, address: String, phoneNumber: String, age: int, classID: int, groupID: int, date: String): Teacher
getObject(teacherID: int, firstName: String, lastName: String, address: String, phoneNumber: String, age: int): Teacher
getObject(csv: String): Teacher

Program features:

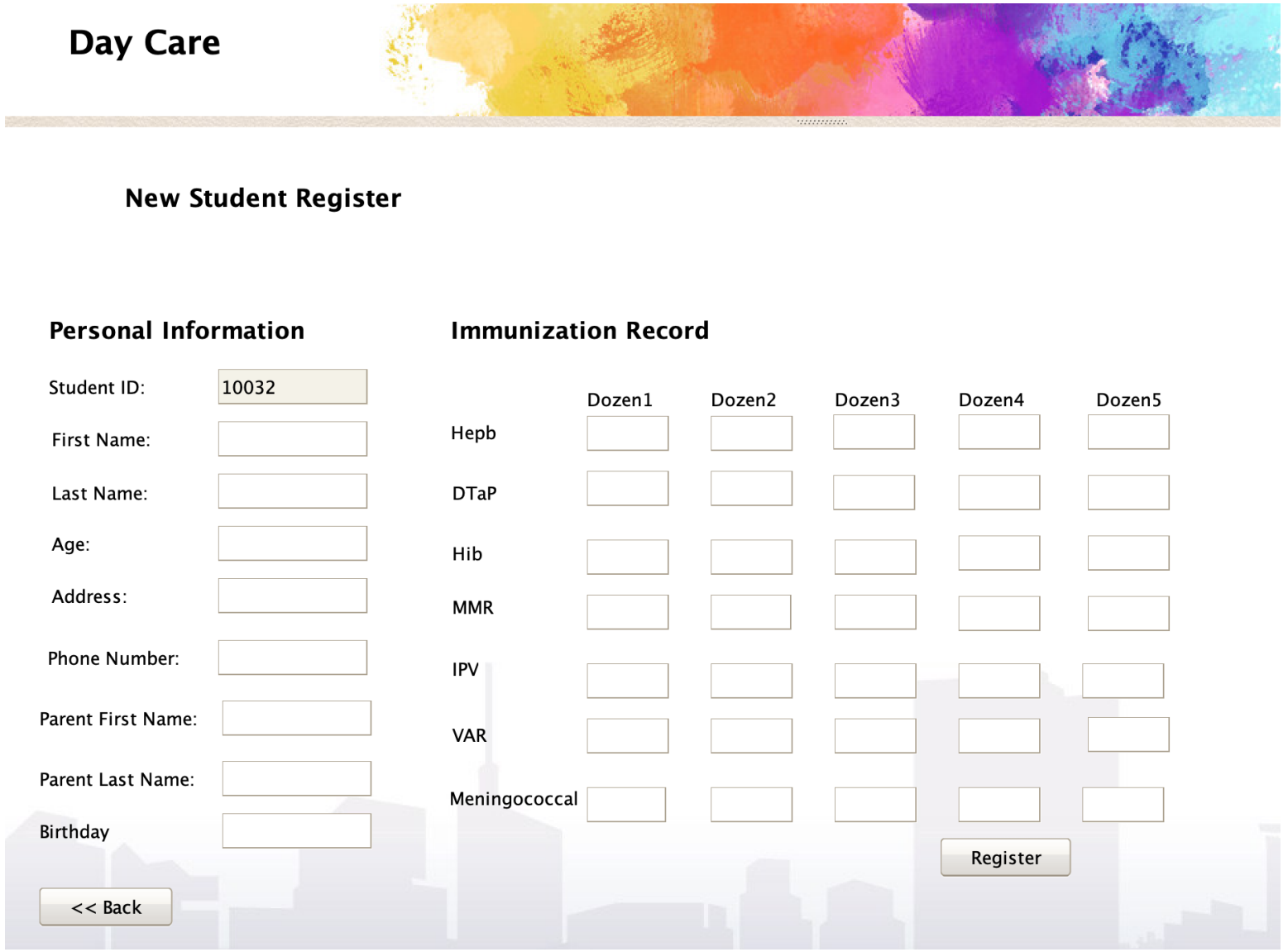
- Objects from CSV files
- Assign students to teacher according to the regulations
- Assign student/teacher groups to classrooms
- Easy to track immunization anniversaries
- Develop alert for upcoming overdue dates
- Develop annual employee review and registrations.

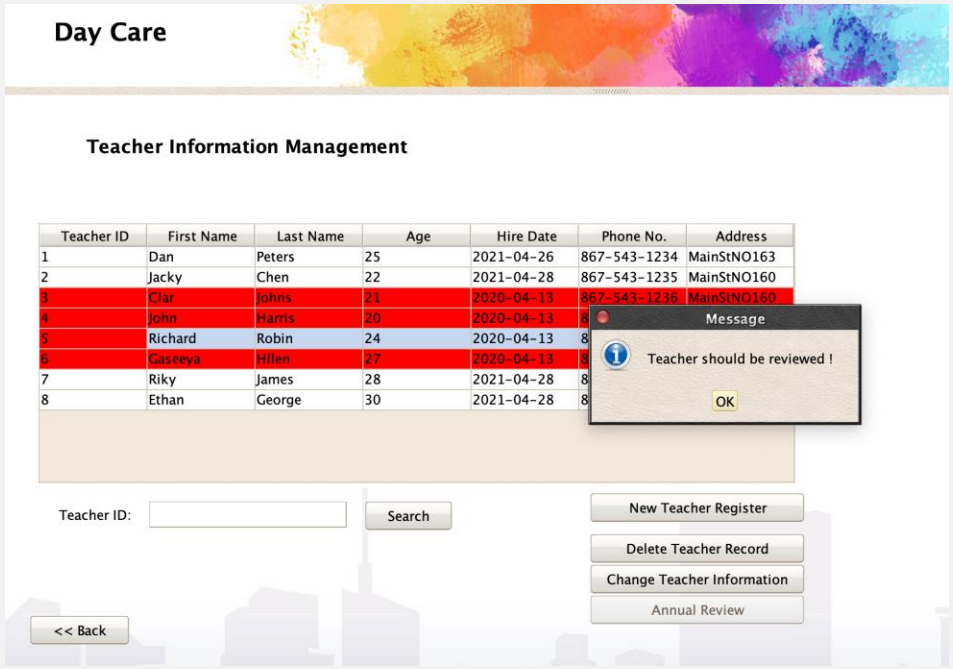
MVC Design Pattern

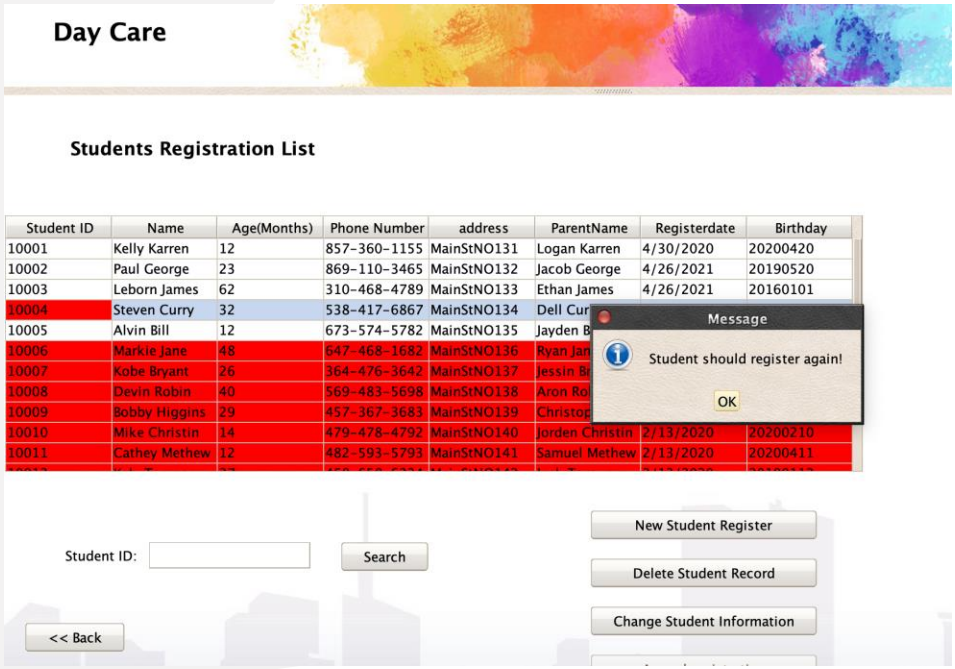
Model View Controller



New Student registration

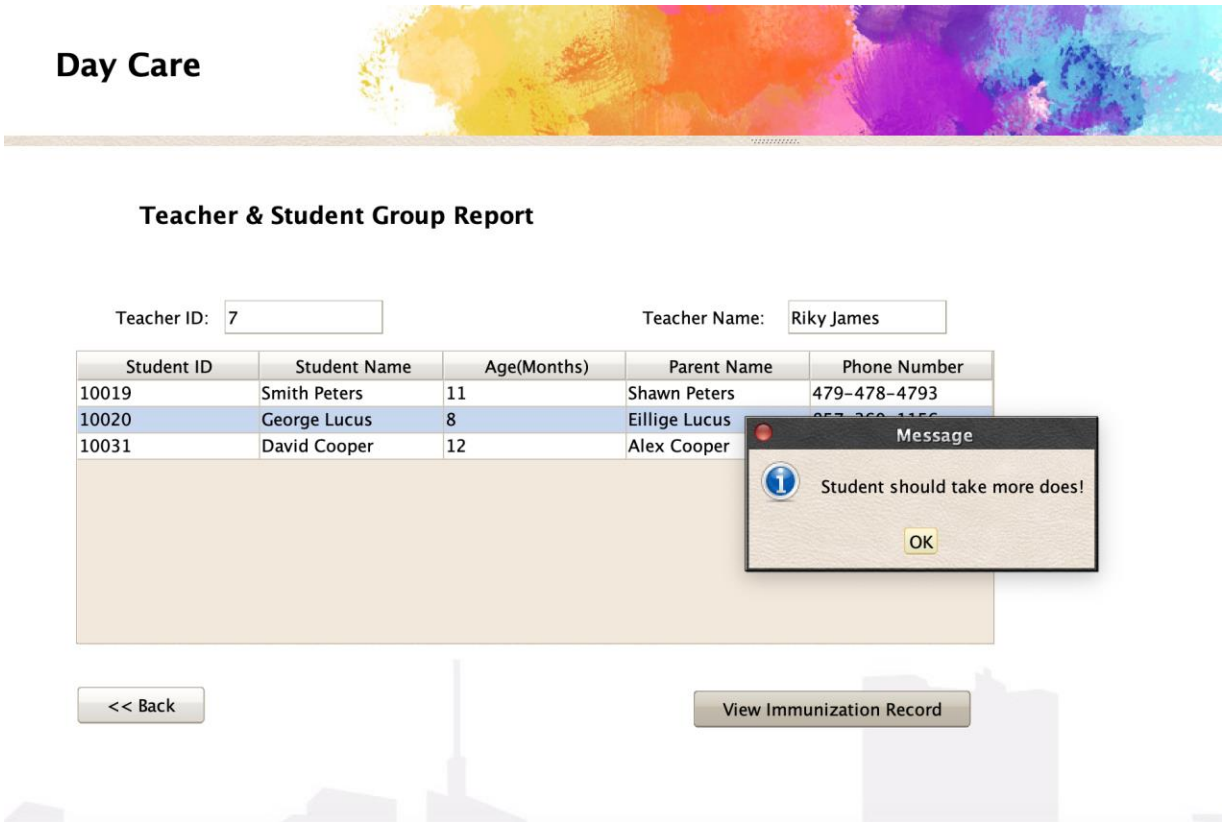


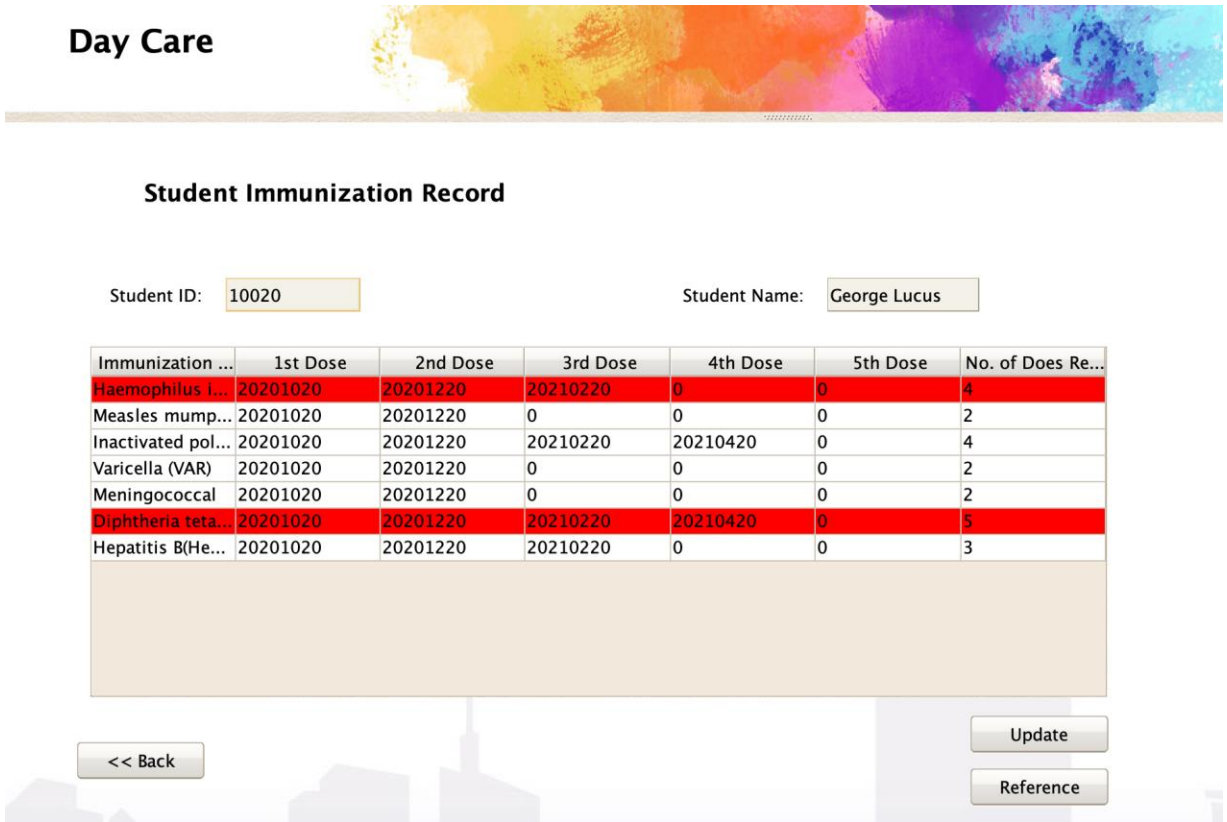




Alerts for student's and teacher's annual registration

Alert for student's immunization overdue





Thank you