Names and IDs

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Group 10 + 40

Project 10

Video drive link:
https://drive.google.com/drive/folders/1IsJEeCjfq_R1ueOcsfkDPPPoTJ29qMZi?usp=sharing

Anti Plagiarism statement

All members of this group swear that this project was written entirely and wholly by us. We acknowledge that any material copied from other sources will be treated as plagiarism, and we will face disciplinary action should that be the case.

Contribution Table

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Everyone has contributed to the making of the project as a whole. At the same time, someone started one class, and another worked on another, as per the plans. And sometimes helped in other code snippets, in cases of urgency or mind blocks.

Design Patterns used and identified

none

Draft for design patterns we would use if we had to remake it

1) Decorator: Use of this decorator design pattern would simplify some of our GUI implementations.

2) Composite: In retrospect, using the composite design pattern would make more of our code reusable.

Singleton, abstract factory, and factory design patterns cannot be seen to fit in our project.

SOLID Principles

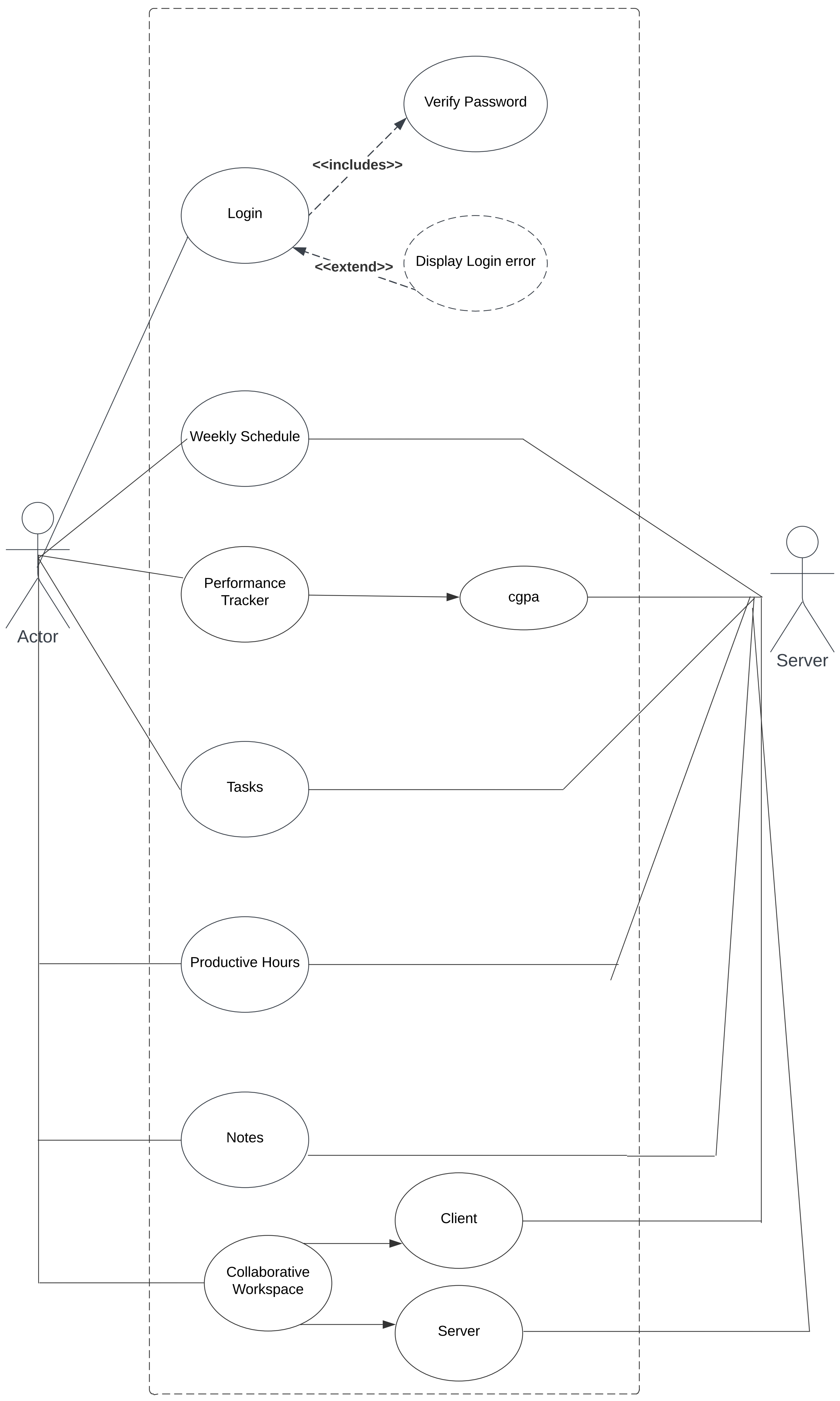
single responsibility principle
- save function will only add the data to the table
- createTable will only create table in the database
- addClass function/delete class
- add note/ delete note
- addtask/ deletetask
- verifyCredentials(login) function
- addTeammember/removeteammember , have single responsibility

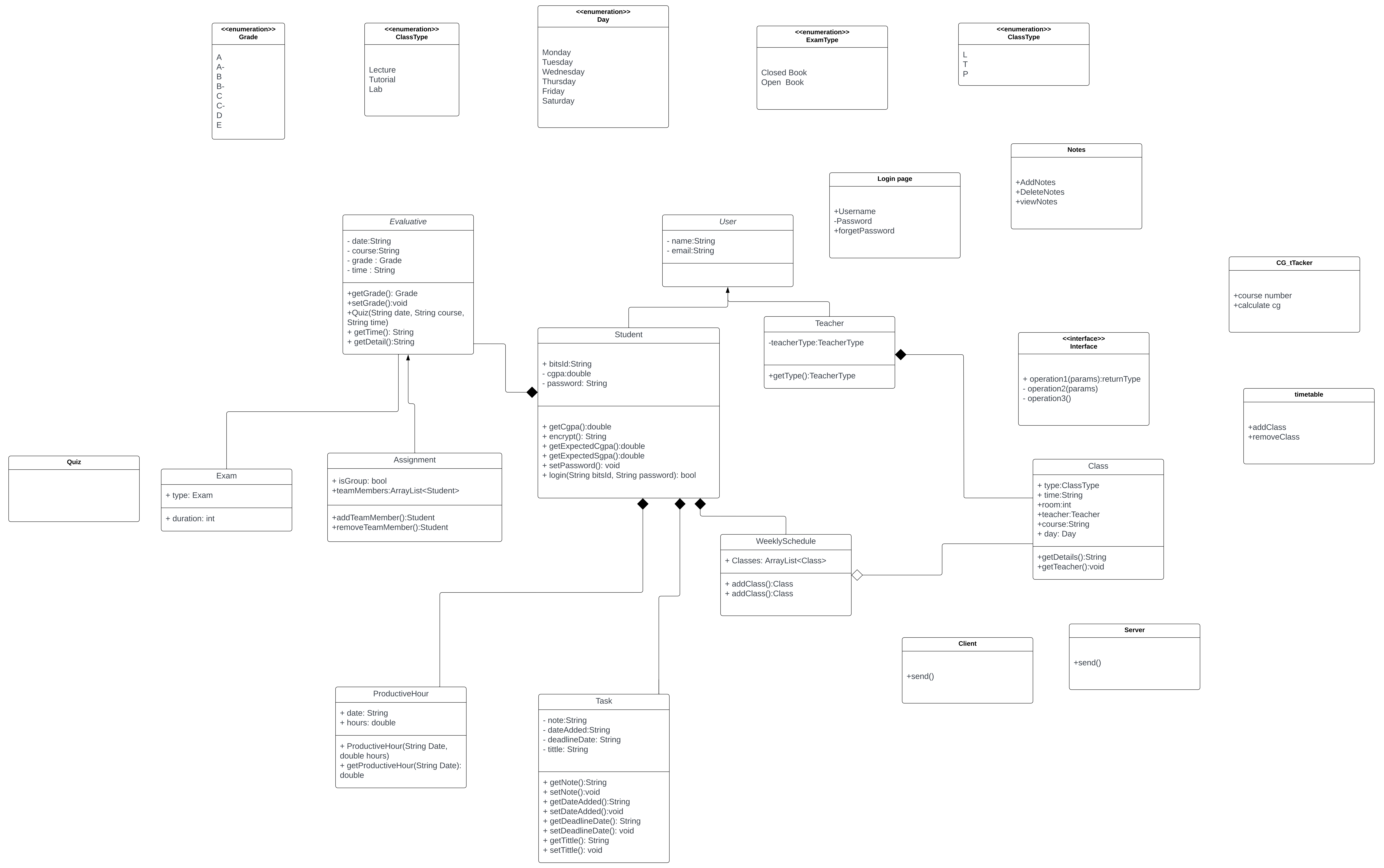
open-closed principle
- using the save function would not require any changes in the code, thus if follows OCP
- using the create table function as well
- checkBitsId, checkEmail also

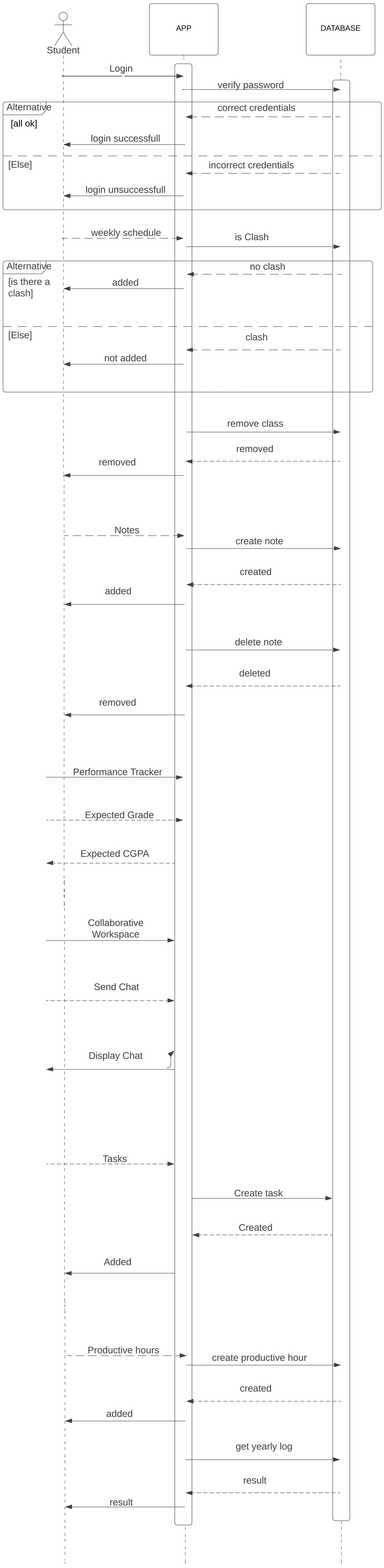
Liskov Substitution Principle
-parent classes are abstract, no objects are possible

Interface Segregation Principle
- interfaces not used

Dependency Inversion Principle
- the save function in Database.Connection is an abstraction
- the createTable function in Database.Connection
- the retreive function in Database.Connection


Verify Password
<<includes>>
Login
Display Login error
<<extend>>
Weekly Schedule
Actor
Performance Tracker
cgpa
Server
Tasks
Productive Hours
Notes
Client
Collaborative Workspace
Server


<<enumeration>> Grade
A
A-
B
B-
C
C-
D
E
<<enumeration>> ClassType
Lecture
Tutorial
Lab
<<enumeration>> Day
Monday
Tuesday
Wednesday
Thursday
Friday
Saturday
<<enumeration>> ExamType
Closed Book
Open Book
<<enumeration>> ClassType
L
T
P
Notes
+AddNotes
+DeleteNotes
+viewNotes
Login page
+Username
-Password
+forgetPassword
CG_tTacker
+course number
+calculate cg
<<interface>> Interface
+ operation1(params):returnType
- operation2(params)
- operation3()
timetable
+addClass
+removeClass
Evaluative
- date:String
- course:String
- grade : Grade
- time : String
+getGrade(): Grade
+setGrade():void
+Quiz(String date, String course, String time)
+ getTime(): String
+ getDetail():String
User
- name:String
- email:String
Teacher
-teacherType:TeacherType
+getType():TeacherType
Student
+ bitsId:String
- cgpa:double
- password: String
+ getCgpa():double
+ encrypt(): String
+ getExpectedCgpa():double
+ getExpectedSgpa():double
+ setPassword(): void
+ login(String bitsId, String password): bool
Quiz
Exam
+ type: Exam
+ duration: int
Assignment
+ isGroup: bool
+teamMembers:ArrayList<Student>
+addTeamMember():Student
+removeTeamMember():Student
Class
+ type:ClassType
+ time:String
+room:int
+teacher:Teacher
+course:String
+ day: Day
+getDetails():String
+getTeacher():void
WeeklySchedule
+ Classes: ArrayList<Class>
+ addClass():Class
+ addClass():Class
Client
+send()
Server
+send()
ProductiveHour
+ date: String
+ hours: double
+ ProductiveHour(String Date, double hours)
+ getProductiveHour(String Date): double
Task
- note:String
- dateAdded:String
- deadlineDate: String
- tittle: String
+ getNote():String
+ setNote():void
+ getDateAdded():String
+ setDateAdded():void
+ getDeadlineDate(): String
+ setDeadlineDate(): void
+ getTittle(): String
+ setTittle(): void


Student
APP
DATABASE
Login
verify password
Alternative
[all ok]
correct credentials
login successfull
[Else]
incorrect credentials
login unsuccessfull
weekly schedule
is Clash
Alternative
[is there a clash]
no clash
added
[Else]
clash
not added
remove class
removed
removed
Notes
create note
created
added
delete note
deleted
removed
Performance Tracker
Expected Grade
Expected CGPA
Collaborative Workspace
Send Chat
Display Chat
Tasks
Create task
Created
Added
Productive hours
create productive hour
created
added
get yearly log
result
result