User (abstract)

Variables:

- Id

- name

- email

- password

Methods:

- void logout();

- void login();

- getter and setter

Admin(inherits from User)

Variables: NOTHING

Methods:

- Call all services

- Payment(Student s)

Instructor (inherits from User)

Variables:

- ArrayList<Course> createCourses

- ArrayList<Certificate> createdCertificates

- ArrayList<quizes> createdquizes

- • ArrayList<Lesson> createdLessons

Methods:

- manage_courses();

- upload_lessons();

- delete_lessons();

- add_quiz();

- delete_quiz();

- generate_certificate();

Student (inherits from User)

Variables:

- ArrayList<Course> enrolledCourses

- ArrayList<Certificate> earnedCertificates

- ArrayList<Course> completedCourses

- Analytics analytics;

Methods:

- enroll_course();

- earn_certificate();

- browse_available_course();

- Do_quiz();

- time_spent();

- finish_lesson();

Analytics

Variables: NOTHING

Methods:

- displayTimeSpent(Student s)
- displayCompletedCourses(Student s)
- displayQuizGrades(Student s)

Certificate

Variables:

- Instructor instructor
- Student student
- Course course

Methods:

- **Create_certificate()**

Course

Variables:

- ArrayList<Quiz> quiz

- ArrayList<Instructor> instructor

- ArrayList< Lessons> lesson

- price

Methods:

- getter and setter

Lesson

Variables:

- lesson_id

- lesson title

- lesson content

- lesson_optional_resource

- lesson_ duration

Methods:

- getter and setter

Quiz

Variables:

- quiz_id

- number_questions

- course_name

- passing_score

- name

- quiz_duration

Methods:

- getter and setter

***ALL Service DEAL WITH DATABSE(JSON) ***

UserService

Variables: NOTHING

Methods:

- add_instructors(Instructor i) && update && delete

- add_student(Student s) && update && delete

CourseService

Variables: NOTHING

Methods:

- add_courses(Course c) && update && delete

- add_lessons(Lesson l) && update && delete

- add_ certificate (Certificate c) && update && delete

QuizService

Methods:

- add_quiz(Quiz q) && update && delete

****

JsonDatabaseManager

Variables: NOTHING

Methods:

- add_courses(Course c) && update && delete to courses.txt

- add_certificate(Certificate c) && update && delete to certificate.txt

- add_instroctors(Instructor i) && update && delete to user.txt

- add_student(Student s) && update && delete to user.txt

- add_quizes(Quiz q) && update && delete to quiz.txt

- add_lessons(Lesson l) && update && delete to lesson.txt