Abstract Class: User

**Abstract Class:
User**

#id: int
#name: string
#email: string
#password: string
#role: string

+getId(): int
+setId(id: int): void
+getName(): string
+setName(name: string): void
+getEmail(): string
+setEmail(email: string): void
+getPassword(): string
+setPassword(password: string): void
+getRole(): string
+setRole(): void

Admin

+manageUsers()
+manageCourses()
+changeRole(id: int)
+deleteUser(id: int)

Teacher

-courses: collection
-assignments: collection

+getCourses():
+getAssignments():
+createAssignment(title: s content: string)
+deleteAssignment(id: int)
+assignToStudents(assignm int, students: array)

Student

-courses: collection
-assignments: collection

+getAssignments(): belongsToMany<Assignmen
+takeQuiz(level: string, language: string)
+submitQuizAnswer(answer string)

Question

-id: int
-question: string
-level: string
-language: string
-skill: string

+getId(): int
+setId(id: int): void
+getQuestionId(): int
+setQuestionId(questionId: int): void
+getAnswer(): string
+setAnswer(answer: string): void
+isCorrect(): boolean
+setCorrect(correct: boolean): void

Course

-id: int
-title: string
-description: string

+getId(): int
+setId(id: int): void
+getTitle(): string
+setTitle(title: string): void
+getDescription(): text
+setDescription(description: text): void

Assignment

-id: int
-title: string
-content: text

+getTitle(): string
+setTitle(title: string): void
+getContent(): text
+setContent(content: text): void
+getId(): int
+setId(id: int): void

Answer

-id: int
-question_id: int
-answer: string
-correct: boolean
-created_at: timestamp
-updated_at: timestamp

+getId(): int
+setId(id: int): void
+getQuestionId(): int
+setQuestionId(questionId: int): void
+getAnswer(): string
+setAnswer(answer: string): void
+isCorrect(): boolean
+setCorrect(correct: boolean): void

Relationships:
- Teacher 1 — creates — 0...* Course
- Teacher 1 — creates — 0...* Assignment
- Student 0...* — Enrolled in — 0...* Course
- Student 0...* — is assigned — 0...* Assignment
- Question 1 — 1...* Answer