

1. User

Attributes

- userId : int [PK]
- profilePhoto : img
- name : string
- surname : string
- phoneNumber : string
- linkedIn : string
- email : string
- password : string
- securityQuestion : string
- securityAnswer : string
- biography : text
- role : enum { student, academicTutor, companyTutor }
- isActive : boolean
- isVerified : boolean
- preferredLanguage : string
- institutionId : int
- department : string
- internalRole : string
- certifications : text
- spokenLanguages : text
- messageNotificationsEnabled : boolean
- internshipNotificationsEnabled : boolean
- calendarNotificationsEnabled : boolean
- theme : enum { LIGHT, DARK }

Methods

- login()
- register()
- recoverPassword()
- changeLanguage()
- interactWithAssistant()
- viewHomePage()
- updateProfile() / updateSettings()
- deleteAccount()

Relationships

User – Institution

- Type: Association
- Cardinality: (1) Institution – (0..*) User

User – CV

- Type: Association
- Cardinality: (1) User – (0..1) CV

User – PasswordRecoveryRequest

- Type: Association
- Cardinality: (1) User – (0..*) PasswordRecoveryRequest

User – AssistantChat

- Type: Association
- Cardinality: (1) User – (0..*) AssistantChat

User – Notification

- Type: Strong aggregation
- Cardinality: (1) User – (0..*) Notification

User (creator) – CalendarEvent

- Type: Association
- Cardinality: (1) User – (0..*) CalendarEvent

User – CalendarEventParticipant

- Type: Association
- Cardinality: (1) User – (0..*) CalendarEventParticipant

User – stageOffer

- Type: Association
- Cardinality: (1) User (companyTutor) – (0..*) stageOffer

User – Match

- Type: Association
- Cardinality: (1) User (student) – (0..*) Match

User (student or company tutor or academic tutor) – SelectionProcess

- Type: Association
- Cardinality: (1) User – (0..*) SelectionProcess (3 FKs: studentId, companyTutorId, academicTutorId)

User (companyTutor or Student) – MeetingQuestionnaire

- Type: Association
- Cardinality: (1) User – (0..*) MeetingQuestionnaire

User (filler or visualizer) – FinalEvaluationQuestionnaire

- Type: Association
- Cardinality: (1) User – (0..*) FinalEvaluationQuestionnaire

User (student or company tutor or academic tutor) – ActiveStage

- Type: Association
- Cardinality: (1) User – (0..*) ActiveStage (3 FKs: studentId, companyTutorId, academicTutorId)

User (reviewer or reviewed) – Review

- Type: Association
- Cardinality: (1) User – (0..*) Review

User – ChatParticipant

- Type: Association
- Cardinality: (1) User – (0..*) ChatParticipant

User (sender or receiver) – Message

- Type: Association
- Cardinality: (1) User – (0..*) Message

User (creator) – Chat

- Type: Association
- Cardinality: (1) User – (0..*) Chat

2. Institution

Attributes

- institutionId : int [PK]
- logo : string
- name : string
- address : string
- contactEmail : string
- contactNumber : string
- sector : string
- size : string
- description : text
- isVerified : boolean
- studentDomains : text
- tutorDomains : text
- isDeletable : boolean

Methods

- addDomain(domainName : string)
- verify()
- updateInstitutionProfile()
- deleteInstitution()
- transferInstitutionOwnership()

Relationships

Institution – Domain

- Type: Strong aggregation
- Cardinality: (1) Institution – (0..*) Domain

Institution – User

- Type: Association
- Cardinality: (1) Institution – (0..*) User

3. Domain

Attributes

- domainId : int [PK]
- domainName : string
- institutionId : int (FK)
- isVerified : boolean

Methods

- verify(domainId : int)

Relationships

Institution – Domain

- Type: Strong Aggregation
- Cardinality: (1) Institution – (0..*) Domain

4. CV

Attributes

- cvId : int [PK]
- userId : int (FK)
- fileName : string
- fileType : string
- fileSize : int
- fileUrl : string

Methods

- upload()

Relationships

User – CV

- Type: Association
- Cardinality: (1) User – (0..1) CV

5. PasswordRecoveryRequest

Attributes

- requestId : int [PK]
- userId : int (FK)
- requestDate : datetime
- status : enum { open, closed }

Methods

- createRequest(email : string)
- closeRequest(requestId : int)

Relationships

User – PasswordRecoveryRequest

- Type: Association
- Cardinality: (1) User – (0..*) PasswordRecoveryRequest

6. AssistantChat

Attributes

- chatId : int [PK]
- userId : int (FK)
- startTime : datetime
- endTime : datetime
- chatLog : text (JSON)

Methods

- startChat(userId : int)
- saveChat(chatLog : text)

Relationships

User – AssistantChat

- Type: Association
- Cardinality: (1) User – (0..*) AssistantChat

7. Notification

Attributes

- notificationId : int [PK]
- userId : int (FK)
- type : enum { CALENDAR_EVENT, INTERNSHIP_UPDATE, ISSUE, ... }
- message : text
- date : datetime
- priority : enum { LOW, MEDIUM, HIGH }
- isRead : boolean

Methods

- markAsRead()
- getShortcutLink() : string

Relationships

User – Notification

- Type: Strong Aggregation
- Cardinality: (1) User – (0..*) Notification

8. CalendarEvent

Attributes

- eventId : int [PK]
- creatorUserId : int (FK to User)
- title : string
- description : text
- eventDateStart : datetime
- eventDateEnd : datetime
- allDay : boolean
- location : string
- videoCallLink : string
- category : enum { MEETING, FEEDBACK, DELIVERY, OTHER }
- notifyBefore : int
- isFinalEvent : boolean
- isDeleted : boolean (soft delete?)

Methods

- createEvent()
- editEvent()

- deleteEvent()
- addParticipant(userId : int)
- removeParticipant(userId : int)

Relationships

User (creator) – CalendarEvent

- Type: Association
- Cardinality: (1) User – (0..*) CalendarEvent

CalendarEvent – CalendarEventParticipant

- Type: Association
- Cardinality: (1) CalendarEvent – (0..*) CalendarEventParticipant

9. CalendarEventParticipant

Attributes

- eventParticipantId : int [PK]
- eventId : int (FK on CalendarEvent)
- userId : int (FK on User)
- status : enum { PENDING, CONFIRMED, DECLINED }
- joinedDate : datetime (if useful)

Methods

- confirmPresence()
- declinePresence()

Relationships

CalendarEvent – CalendarEventParticipant

- Type: Association
- Cardinality: (1) CalendarEvent – (0..*) CalendarEventParticipant

User – CalendarEventParticipant

- Type: Association
- Cardinality: (1) User – (0..*) CalendarEventParticipant

10. StageOffer

Attributes

- offerId : int [PK]
- title : string
- description : text
- category : enum { Marketing, Programming, HumanResources, Communication, Finance, Design, Other }
- requirements : text
- duration : string
- compensation : string
- location : string
- deadline : date
- companyTutorId : int (FK on User, role=companyTutor)

- status : enum { DRAFT, PUBLISHED }
- lastModified : datetime
- requiredLanguages : text

Methods

- createOffer()
- editOffer()
- publishOffer()
- saveDraft()
- deleteOffer()
- optimizeWithLLM()

Relationships

User (companyTutor) – StageOffer

- Type: Association
- Cardinality: (1) User – (0..*) StageOffer

StageOffer – Match

- Type: Association
- Cardinality: (1) StageOffer – (0..*) Match

StageOffer – SelectionProcess

- Type: Association
- Cardinality: (1) StageOffer – (0..*) SelectionProcess

StageOffer – ActiveStage

- Type: Association
- Cardinality: (1) StageOffer – (1) ActiveStage

11. Match (matchmaking Student ↔ StageOffer)

Attributes

- matchId : int [PK]
- studentUserId : int (FK on User, role=student)
- stageOfferId : int (FK on StageOffer)
- matchPercentage : float
- feedback : enum { UP, DOWN, NONE }

Methods

- sendOfferToStudent()
- setFeedback(feedback : enum)

Relationships

StageOffer – Match

- Type: Association
- Cardinality: (1) StageOffer – (0..*) Match

User (student) – Match

- Type: Association
- Cardinality: (1) User – (0..*) Match

12. SelectionProcess (Tab “Selection Process”)

Attributes

- selectionProcessId : int [PK]
- stageOfferId : int (FK on StageOffer)
- studentId : int (FK on User, role=student)
- academicTutorId : int (FK on User, role=academicTutor, optional)
- companyTutorId : int (FK on User, role=companyTutor)
- tag : enum { RECEIVED, SENT }
- status : enum { MATCHMAKING, NOT_VIEWED, VIEWED, REJECTED1, REJECTED2, ACCEPTED_STUDENT, ACCEPTED_COMPANY, MEETING_SET, QUESTIONNAIRE_COMPANY, DECISION_STUDENT, STUDENT_REJECTS, STUDENT_CALL_AGAIN, STUDENT_ACCEPTS, ACADEMIC_TUTOR_CHOSEN, ACADEMIC_TUTOR_REJECTED, FINAL_DECISION_COMPANY, PROCESS_CONCLUDED }
- deadline : date
- creationDate : datetime

Methods

- acceptOffer(by : string)
- rejectOffer(by : string)
- scheduleMeeting(dateTime : datetime)
- fillQuestionnaire()
- chooseAcademicTutor(tutorEmail : string)
- finalDecisionCompany()
- removeProcess()

Relationships

StageOffer – SelectionProcess

- Type: Association
- Cardinality: (1) StageOffer – (0..*) SelectionProcess

User (student or company tutor or academic tutor) – SelectionProcess

- Type: Association
- Cardinality: (1) User – (0..*) SelectionProcess (3 FKs: studentId, companyTutorId, academicTutorId)

SelectionProcess – MeetingQuestionnaire

- Type: Association
- Cardinality: (1) SelectionProcess – (1) MeetingQuestionnaire

Selection Process – Chat

- Type: Association
- Cardinality: (0..1) Selection Process – (0..*) Chat

13. MeetingQuestionnaire (First Meeting Questionnaire)

Attributes

- meetingQuestionnaireId : int [PK]
- selectionProcessId : int (FK on SelectionProcess)

- filledByUserId : int (FK on User, role=companyTutor)
- creationDate : datetime
- submissionDate : datetime (null if draft)
- answers : text (JSON)

Methods

- fillQuestionnaire(data : struct)
- submit()
- viewQuestionnaire()
- editQuestionnaire()
- deleteQuestionnaire()

Relationships

SelectionProcess – MeetingQuestionnaire

- Type: Association
- Cardinality: (1) SelectionProcess – (1) MeetingQuestionnaire

User (companyTutor or Student) – MeetingQuestionnaire

- Type: Association
- Cardinality: (1) User – (0..*) MeetingQuestionnaire

14. FinalEvaluationQuestionnaire (Final Evaluation)

Attributes

- finalEvalQuestionnaireId : int [PK]
- activeStageId : int (FK on ActiveStage)
- filledByUserId : int (FK on User)
- roleFiller : enum { STUDENT, COMPANY_TUTOR, ACADEMIC_TUTOR }
- creationDate : datetime
- submissionDate : datetime (null if draft)
- answers : text (JSON)

Methods

- fillQuestionnaire(data : struct)
- submit()
- viewQuestionnaire()
- editQuestionnaire()
- deleteQuestionnaire()

Relationships

ActiveStage – FinalEvaluationQuestionnaire

- Type: Association
- Cardinality: (1) ActiveStage – (0..*) FinalEvaluationQuestionnaire

User (filler or visualizer) – FinalEvaluationQuestionnaire

- Type: Association
- Cardinality: (1) User – (0..*) FinalEvaluationQuestionnaire

15. ActiveStage (Tab “Active Stages”)

Attributes

- activeStageld : int [PK]
- stageOfferId : int (FK on StageOffer)
- studentId : int (FK on User, role=student)
- academicTutorId : int (FK on User, role=academicTutor)
- companyTutorId : int (FK on User, role=companyTutor)
- startDate : datetime
- endDate : datetime
- status : enum { IN_PROGRESS, COMPLETED, SUSPENDED, TERMINATED, ... }
- problematic : text

Methods

- updateStageStatus(newStatus : enum)
- reportProblem(details : string) (actually, problem reporting occurs via PROBLEM Chat, see below)
- openChatForIssue()
- closeStage()
- suspendStage()
- resumeStage()

Relationships

StageOffer – ActiveStage

- Type: Association
- Cardinality: (1) StageOffer – (1) ActiveStage

User (student or company tutor or academic tutor) – ActiveStage

- Type: Association
- Cardinality: (1) User – (0..*) ActiveStage (3 FKs: studentId, companyTutorId, academicTutorId)

ActiveStage – StageStateHistory

- Type: Association
- Cardinality: (1) ActiveStage – (0..*) StageStateHistory

ActiveStage – FinalEvaluationQuestionnaire

- Type: Association
- Cardinality: (1) ActiveStage – (0..*) FinalEvaluationQuestionnaire

ActiveStage – Review

- Type: Association
- Cardinality: (1) ActiveStage – (0..*) Review

ActiveStage – Chat (optional if linking problem chats to the stage)

- Type: Association
- Cardinality: (0..1) ActiveStage – (0..*) Chat

16. StageStateHistory (state history)

Attributes

- historyId : int [PK]
- activeStageId : int (FK on ActiveStage)
- state : enum { START_STAGE, SCHEDULED_EVENT, PAUSE, LAST_EVENT, FINAL_EVALUATION, END_STAGE, ... }
- startDate : datetime
- endDate : datetime (null if ongoing)
- description : text

Methods

- changeState(newState : enum)
- setStartDate(...)
- setEndDate(...)

Relationships

ActiveStage – StageStateHistory

- Type: Association
- Cardinality: (1) ActiveStage – (0..*) StageStateHistory

17. Review (reviews)

Attributes

- reviewId : int [PK]
- activeStageId : int (FK on ActiveStage)
- reviewerId : int (FK on User)
- reviewedUserId : int (FK on User)
- rating : int
- text : text
- creationDate : datetime

Methods

- createReview(...)
- editReview(...)
- deleteReview()
- getAverageRating(userId : int)

Relationships

ActiveStage – Review

- Type: Association
- Cardinality: (1) ActiveStage – (0..*) Review

User (reviewer or reviewed) – Review

- Type: Association
- Cardinality: (1) User – (0..*) Review

18. Chat (Generic Messaging, Issue, or Video call)

Attributes

- chatId : int [PK]
- name : string

- description : string
- chatType : enum { REGULAR, PROBLEM, VIDEO }
- problemTitle : string (if chatType=PROBLEM)
- problemCategory : enum { COMMUNICATION, TECHNICAL_SKILLS, TIME_MANAGEMENT, INTERPERSONAL_PROBLEMS, OTHER } (if PROBLEM)
- problemDescription : text (if PROBLEM)
- problemStatus : enum { IN_PROGRESS, WAITING_FOR_RESPONSE, RESOLVED, ... } (if PROBLEM)
- videoCallDateTime : datetime (if chatType=VIDEO)
- creationDate : datetime
- createdByUserId : int (FK on User)
- activeStageId : int (FK on ActiveStage, optional if the chat is linked to a stage)
- isDeleted : boolean

Methods

- createChat(name, description, chatType)
- addParticipant(userId : int)
- removeParticipant(userId : int)
- reportProblem(...) (if chatType=PROBLEM)
- updateProblemStatus(newStatus)
- scheduleVideoCall(dateTime)
- deleteChat()

Relationships

User (creator) – Chat

- Type: Association
- Cardinality: (1) User – (0..*) Chat

Chat – ChatParticipant

- Type: Association
- Cardinality: (1) Chat – (0..*) ChatParticipant

Chat – Message

- Type: Association
- Cardinality: (1) Chat – (0..*) Message

ActiveStage – Chat (optional if linking problem chats to the stage)

- Type: Association
- Cardinality: (0..1) ActiveStage – (0..*) Chat

Selection Process – Chat

- Type: Association
- Cardinality: (0..1) Selection Process – (0..*) Chat

19. ChatParticipant (chat participants)

Attributes

- chatParticipantId : int [PK]
- chatId : int (FK on Chat)
- userId : int (FK on User)

- canAddOthers : boolean
- roleInChat : enum { CREATOR, MEMBER }
- joinedDate : datetime

Methods

- assignRole()
- removeParticipant()

Relationships

Chat – ChatParticipant

- Type: Association
- Cardinality: (1) Chat – (0..*) ChatParticipant

User – ChatParticipant

- Type: Association
- Cardinality: (1) User – (0..*) ChatParticipant

20. Message (individual chat messages)

Attributes

- messageId : int [PK]
- chatId : int (FK on Chat)
- senderUserId : int (FK on User)
- content : text
- contentType : enum { TEXT, FILE, AUDIO, SYSTEM }
- timestamp : datetime
- isImportant : boolean
- isRead : boolean

Methods

- sendMessage(senderId, content)
- markAsRead()
- attachFile(fileData)
- highlightAsProblem()

Relationships

Chat – Message

- Type: Association
- Cardinality: (1) Chat – (0..*) Message

User (sender or receiver) – Message

- Type: Association
- Cardinality: (1) User – (0..*) Message