Ahmedabad University

Software Engineering Project: ForwardFocus(Career Guidance System)

Requirement Understanding Document

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1. Introduction

1.1. Purpose of the system

- Guidance is particularly very important in life. Throughout their lives people face many situations where they could benefit from unbiased advice. The primary difficulty an undergraduate student faces is choosing the best career considering strengths and weaknesses. The purpose of our system is to develop a platform where students can get guidance, which will help them to make mature and informed decisions. Purpose is to be with students, starting from aptitude tests till the university selection phase. The students will be analysed based on their previous scores, aptitude scores and mock results.Based on the evaluation and performance(GPA,Test score) the system opts to find the best career road map along with providing comprehensive information about admission requirements, for building a good profile and list of universities to that student.

1.2. The scope of the system

- Forward Focus Career Guidance is a tool which effectively allows Undergraduate/Graduate students from various streams to realize their true potential and suggests options for their future studies that aligns with their natural inclinations. Based on the interests of a student, he/she is enrolled for a particular category of training and scheduled to give tests. Our software aims at providing outstanding support, training and feedback oriented evaluation systems to the users.Our system can prepare students for entrance exams like CAT, GRE, GMAT and TOEFL/IELTS based on their interest fields.
  - Following are the features of the system:
  - User signup and login facility.

- Enrollment of students for a particular training.
- Platform that keeps track of schedules and regular examinations.
- Evaluation system based on performance in examination with feedback to users.
- Predicting universities based on academic performance and test scores.

2. Data Flow Diagrams

2.1. LEVEL 0
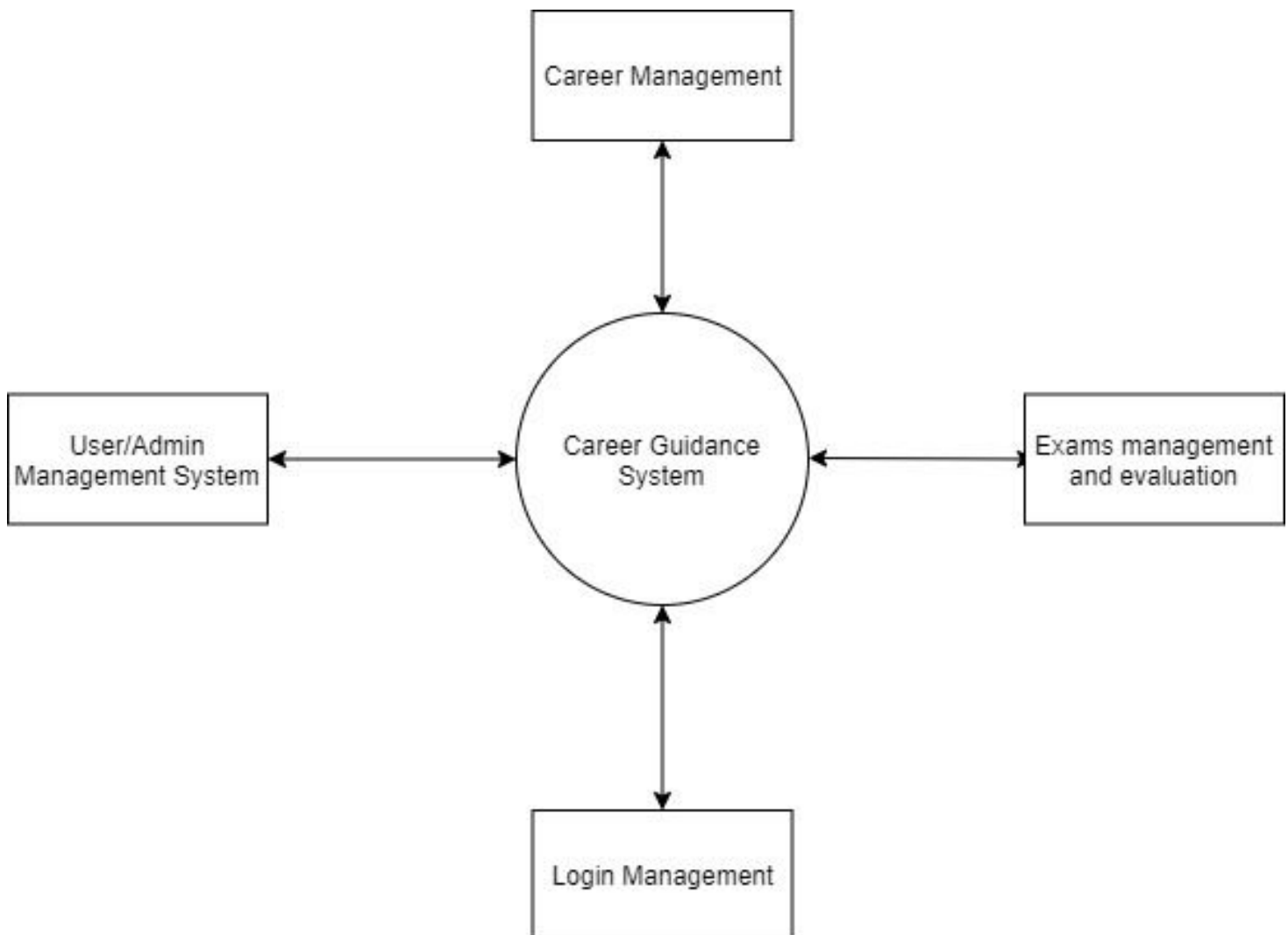
2.2   Student side DFD
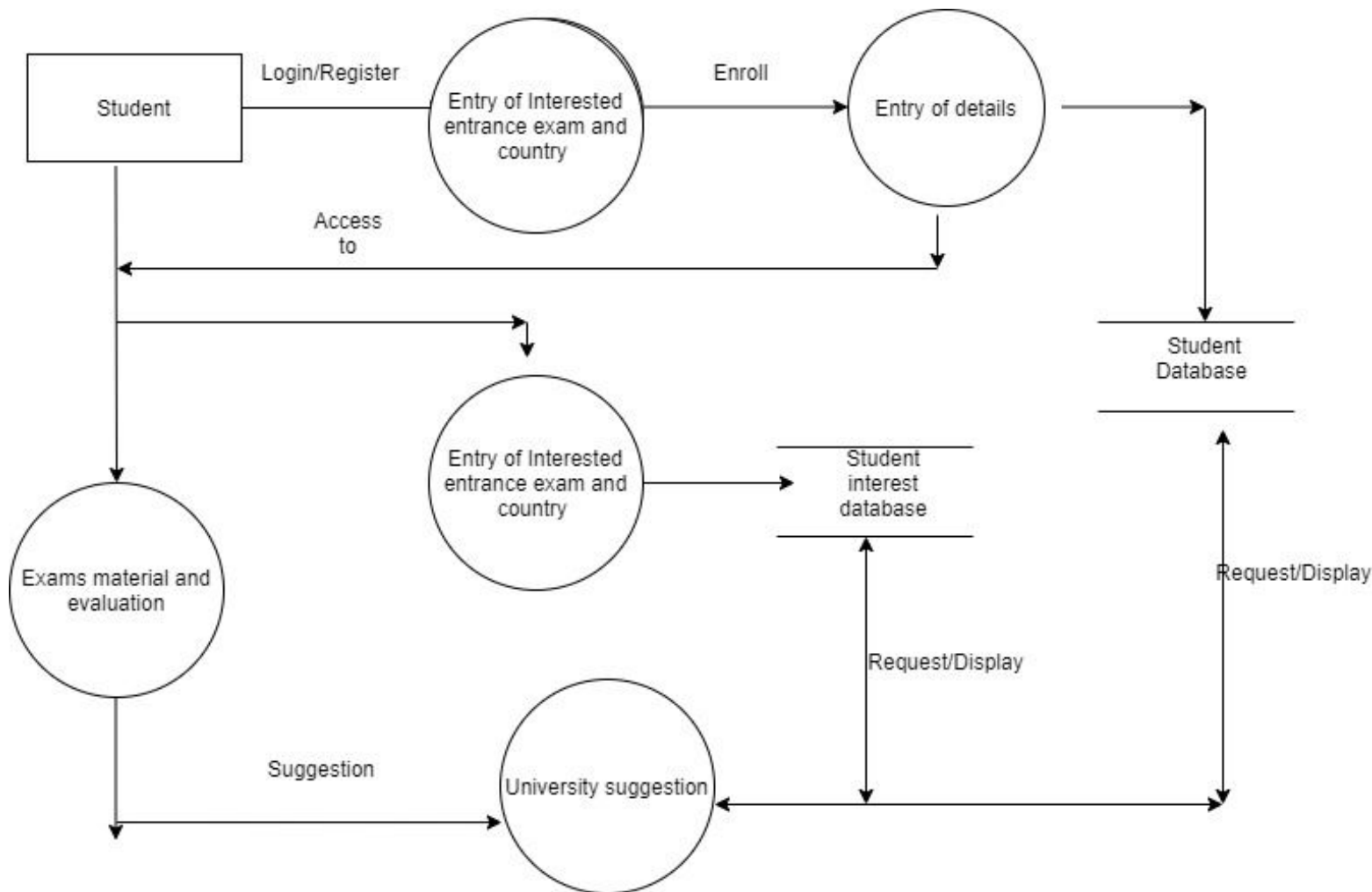
2.3 Admin side DFD

3. State Diagrams

3.1   Student Side State Diagram

3.2 Admin Side State Diagram

4. <u>Use Case Diagram</u>

5. <u>ER</u> <u>Diagram</u>

Ahmedabad University

AreaOfInterest

FK1	userID
FK2	interest_field_ID
	country :varchar(25)
	exam_interest: varchar(20)

User

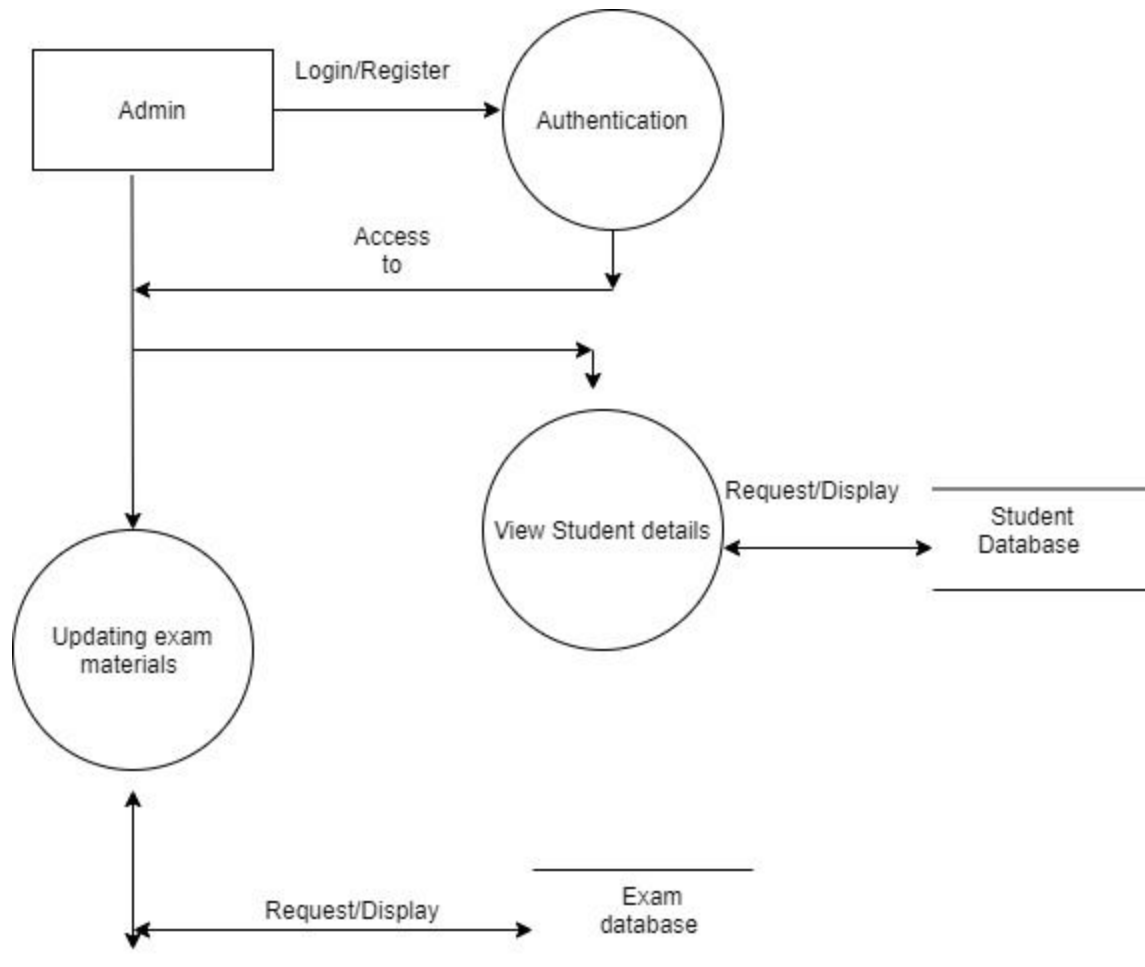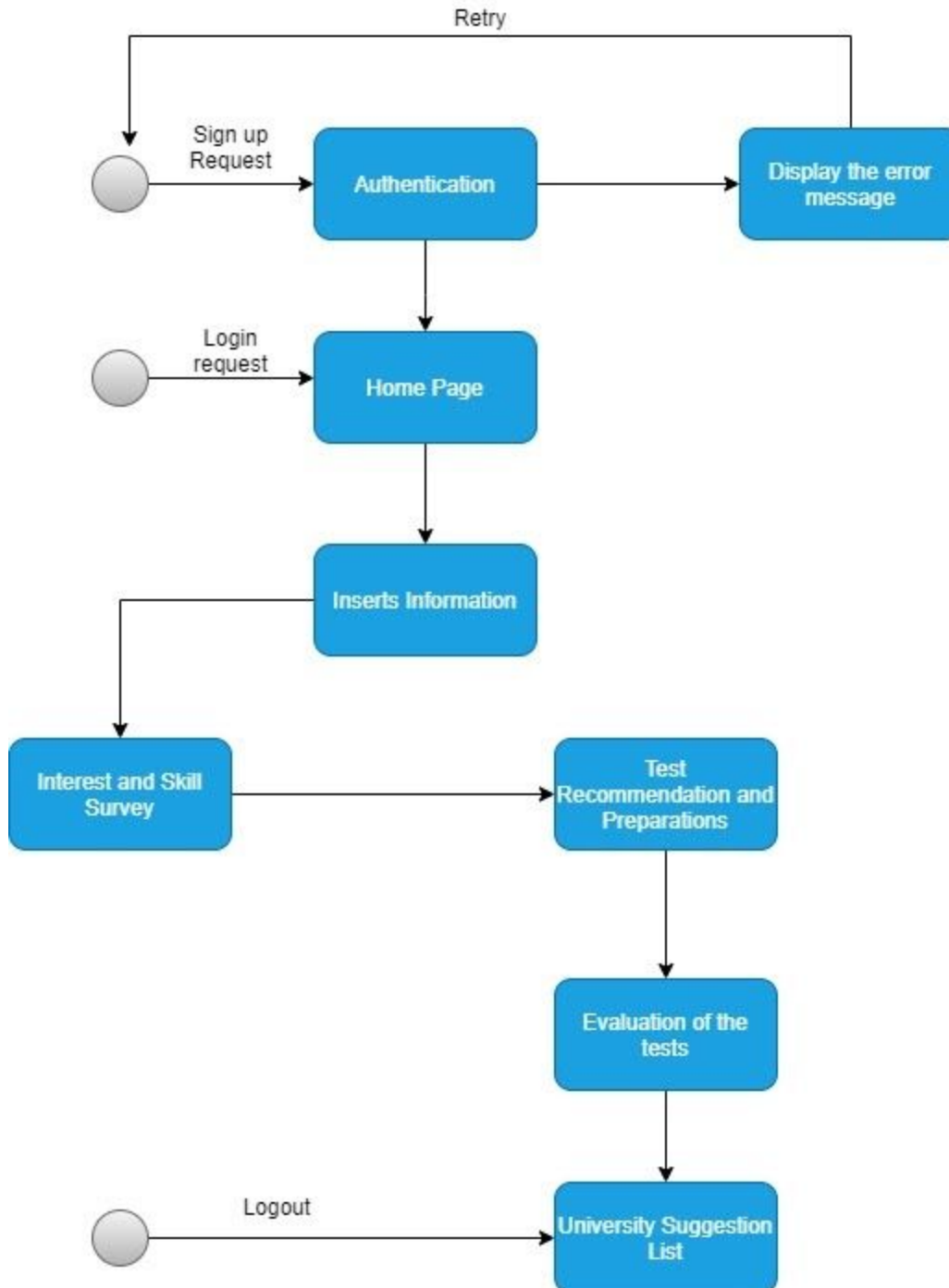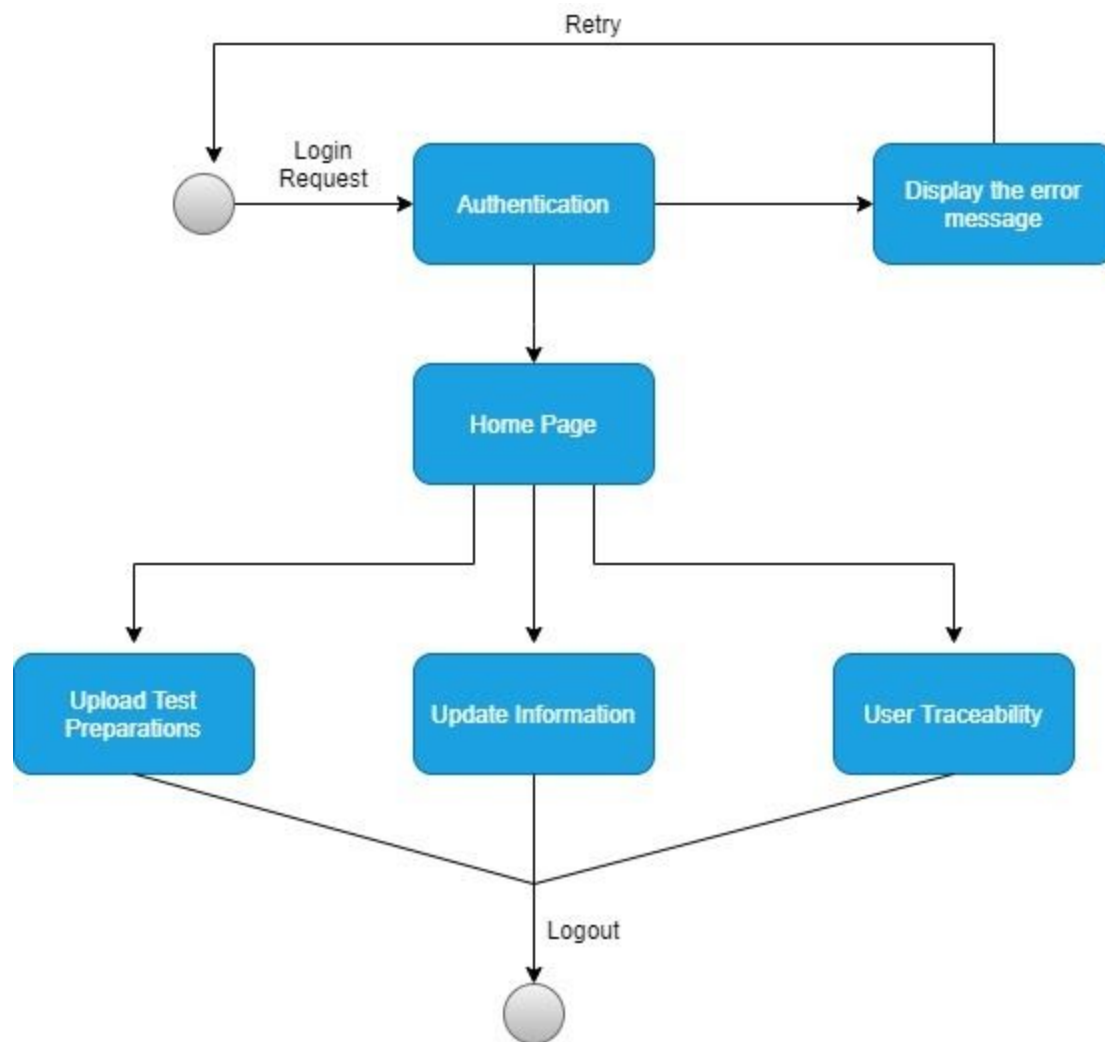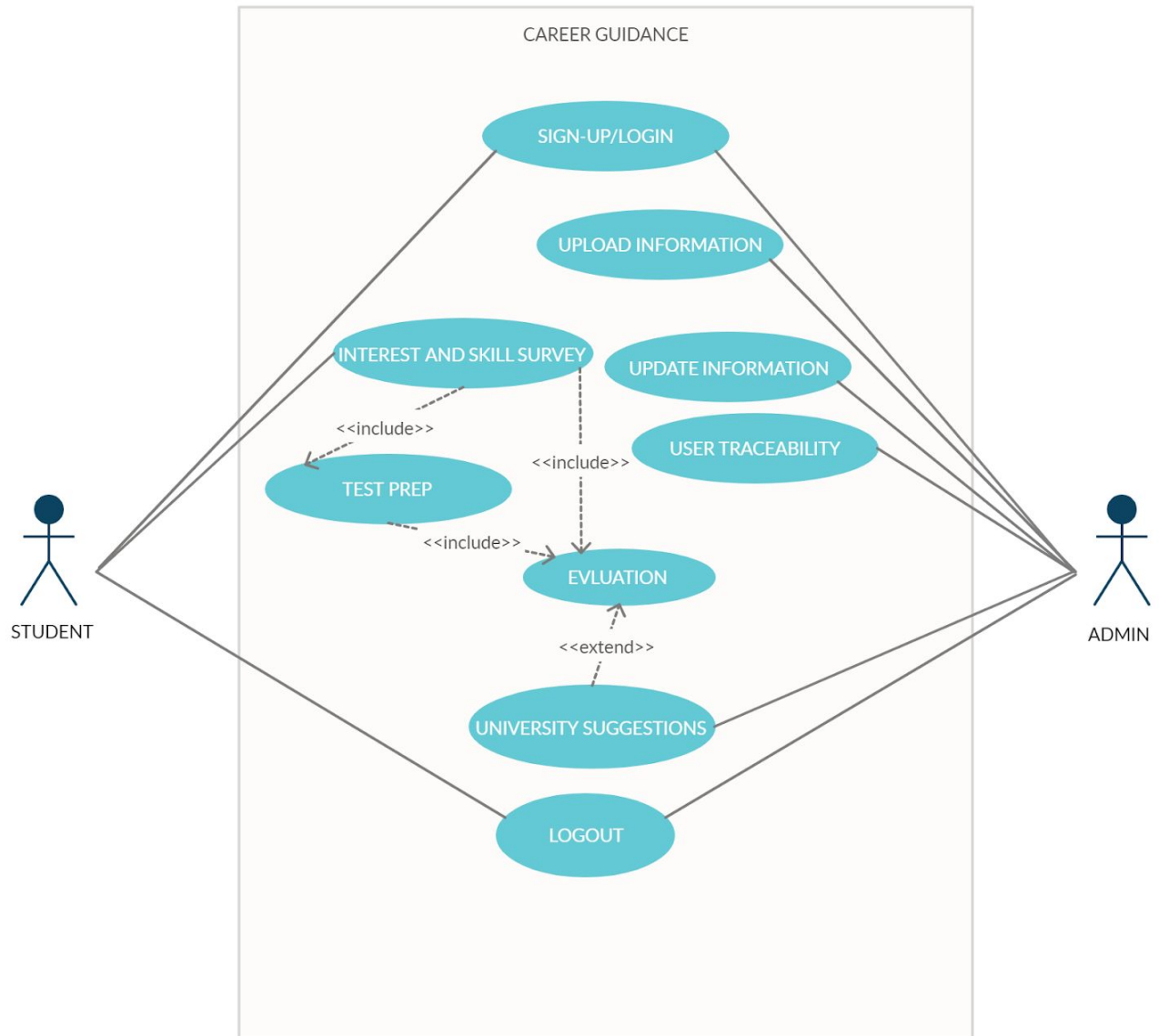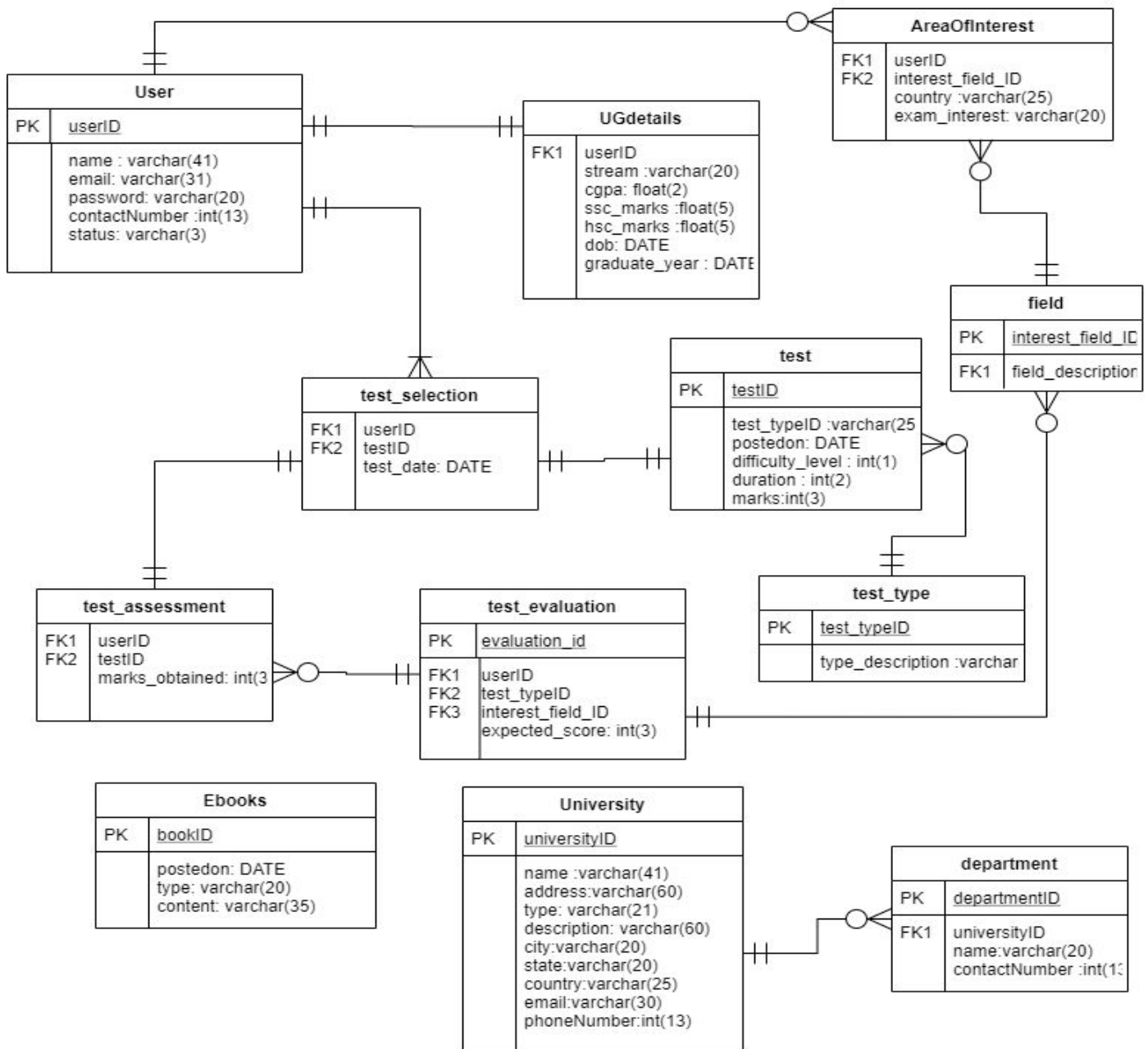|	
PK	userID
	name : varchar(41)
	email: varchar(31)
	password: varchar(20)
	contactNumber :int(13)
	status: varchar(3)

UGdetails

FK1	userID
	stream :varchar(20)
	cgpa: float(2)
	ssc_marks :float(5)
	hsc_marks :float(5)
	dob: DATE
	graduate_year : DATE

field

PK	interest_field_ID
FK1	field_description

test

PK	testID
	test_typeID :varchar(25
	postedon: DATE
	difficulty_level : int(1)
	duration : int(2)
	marks:int(3)

test_selection

FK1	userID
FK2	testID
	test_date: DATE

test_assessment

FK1	userID
FK2	testID
	marks_obtained: int(3

test_evaluation

PK	evaluation_id
FK1	userID
FK2	test_typeID
FK3	interest_field_ID
	expected_score: int(3)

test_type

PK	test_typeID
	type_description :varchar

Ebooks

PK	bookID
	postedon: DATE
	type: varchar(20)
	content: varchar(35)

University

PK	universityID
	name :varchar(41)
	address:varchar(60)
	type: varchar(21)
	description: varchar(60)
	city:varchar(20)
	state:varchar(20)
	country:varchar(25)
	email:varchar(30)
	phoneNumber:int(13)

department

PK	departmentID
FK1	universityID
	name:varchar(20)
	contactNumber :int(13

5. Activity Diagram

5.1 Admin Side Activity Diagram
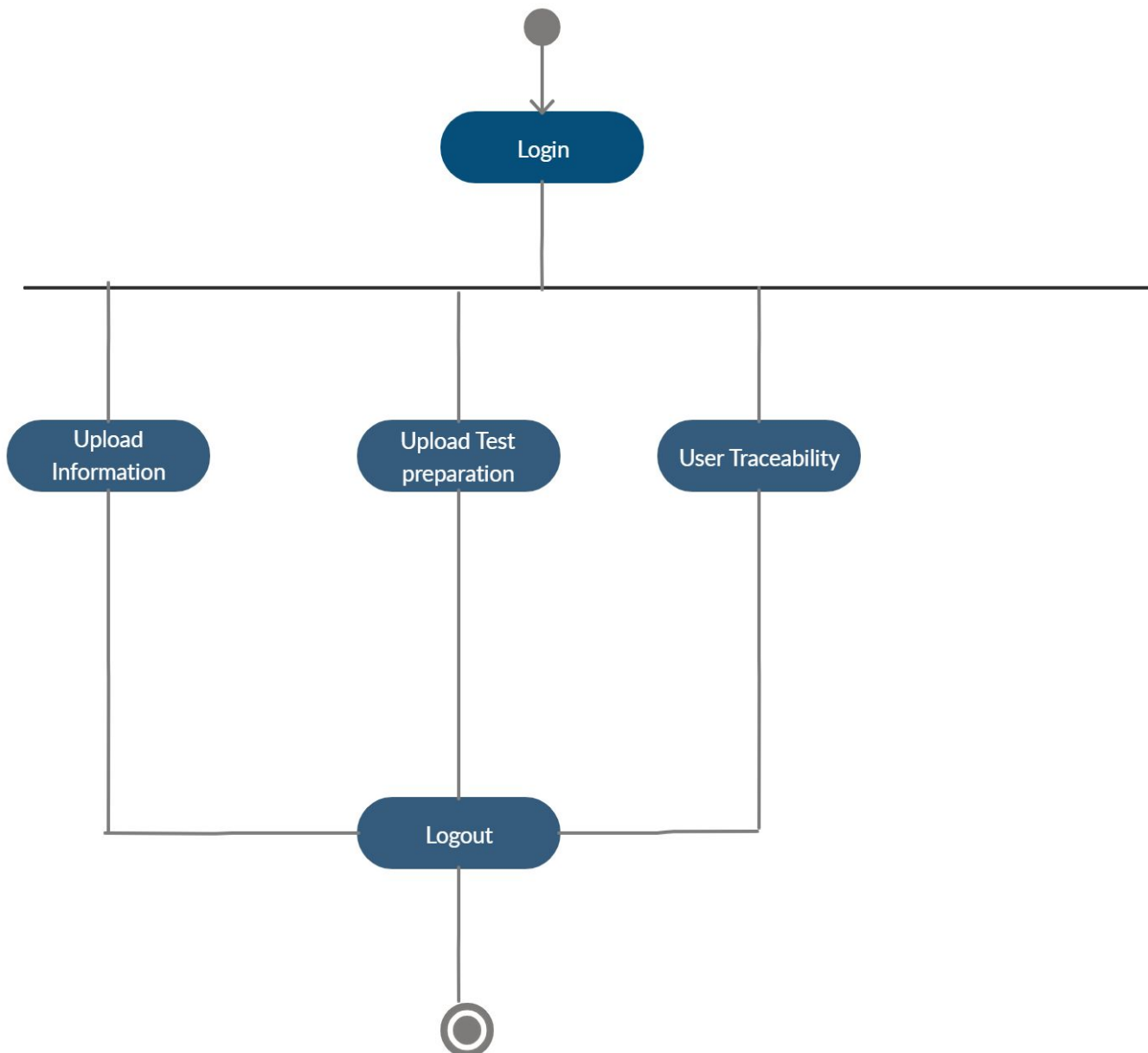
5.2 User side Activity Diagram

Login

Exists

NO — YES

Sign Up → Enter UG Details

Interest and Skill Survey

Test preparation and assessment

Evaluation

Interest and Skill Survey

Logout
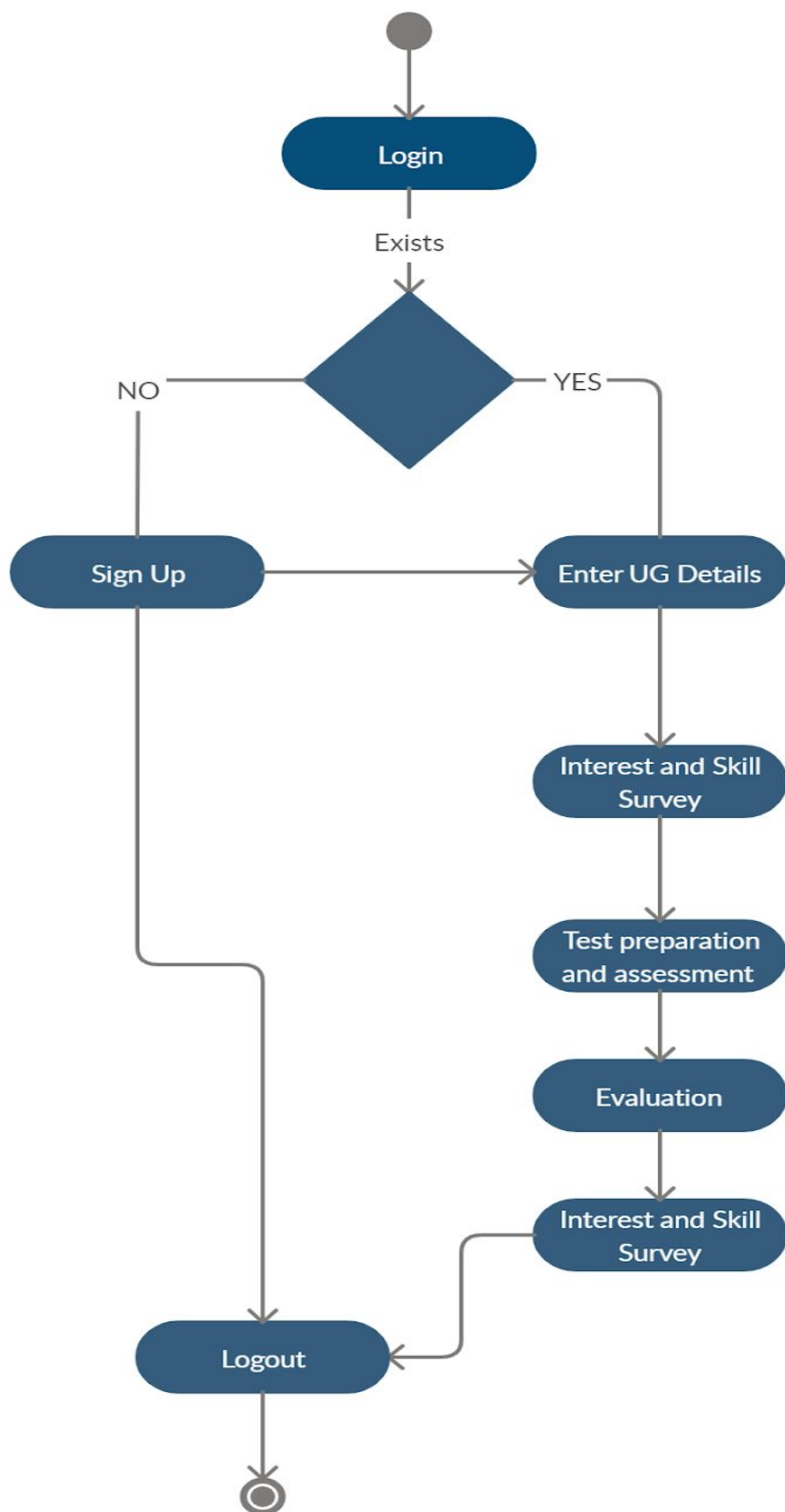
6 Functional Specification Requirement

6.1.1. Time Saver

- All the required information for future guidance along with a list of suggested universities is available on one platform.
- Saves the time of physically looking for options by logging into the system.

6.1.2. Ease of use

- The system can be used by laymen.
- User-Friendly
- All the information is accessible by 3 clicks by any user.

6.1.3. Integration with the current technology

- Final list of suggested University stored in a Database based on mock test results provided by the system.

7. Non Functional Requirements

7.1. Usability and Accessibility

- An online software that acknowledges a student regarding their graduate university on the basis of interests and evaluation.

- Can be accessed from all places

- . User can easily register, enter details, mention area of interest and give exams

7.2. **Reliability**

- Universities are suggested after considering all the factors of: area of interest, student details and results of exams

- Accurate results are obtained after evaluating all the factors.

- Students will get precise and unbiased university suggestions

7.3. **Performance**

- Highly accurate

- Many users can access it at the same time

- All the process takes place chronologically

- Failure of one process will not affect others, as the details would have been stored accordingly.

7.4. **Modularity**

- Updation of details can be made by a user at the required instance.

- Admin can remove or update new test materials accordingly.

- Universities and their criteria can be updated

7.5. **Interface and Security**

- Login/Register Page for both user and admin

- Separate interfaces for students and admin

- Students' details are secured safely and cannot be accessed by other users, except by admin.

8. Traceability Matrix

Requirement Number	Requirement Description	TestCaseID	Priority	Status