

Software Requirement Specification Document for TABAANI

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G 10

CS 120

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1. *Introduction :*

1.1. *Purpose:* The purpose of the Software

Requirements Specification document is to clearly define the system under development, namely Tabaani. It will explain the purpose, describe the features and behavior of the website, define the intended functionality required by the customer, and the constraints under which it must operate.

1.2. *Intended audience:* the intended audience includes the owner of the website and the end-users of Tabaani(the visitors (people who will start to check the site web and its features), and the customers (pupils who will need help, assistance, and exclusive features). This document is also intended for the development team such as the requirements team, requirements analyst, design team, and other members of the developing organization.

1.3. *Scope of the system specified:* in order to minimize the reorientation rate and help bachelors to decide on the university that suits them most, we decided to start working on our platform named Tabaani. “Tabaani” is an online platform that helps pupils who have their baccalaureate degree through their orientation phase and guides them along the way so that they can pick the right future path to reach their goals.

This website will allow the following functionalities online: to search either public or private colleges or the field of studies desired, to access guides on how to use the platform and tips about the orientation process, and to subscribe for visitors; to have clear roads including the colleges you can go to and the number of years to finish your studies to reach your dream profession and to watch explanatory videos for customers; and to make a detailed profile upon which the platform will match with the

compatible fields, to get in touch with experts for further exclusive details and to access to all the scholarships available at the moment for premium customers. Tabaani is intended to remedy the traditional way of getting information and lighten up a better future for the upcoming generations.

1.4. *References, Definitions, Acronyms, and Abbreviations:*

- **Functional requirement:** a service provided by the software system.
- **TBS:** Tunis Business School
- **CS:** Computer science
- **Visitor:** someone who visits the website.
- **Customer:** someone with an account on the platform and have access to videos and roads.
- **Premium customer:** someone who has a premium account on the platform and that has access to exclusive features such as experts and scholarships.
- **Experts:** someone highly qualified to guide and give advice concerning the orientation process.
- **Ministry of higher education:** collaborator that provides all the information needed to be known by the bachelors who will soon go through the orientation process.
- **Embassies:** collaborators that will offer all the information about the scholarships available in different places around the world.

1.5. *Overview:* Section 2 of the SRS describes the product in more detail. Section 3 provides a complete list of the functional requirements of the intended system. Section 4 provides the non-functional requirements.

Section 5 shows the use case diagram. The appendices will appear next.

2. Overall Description:

2.1. Product Perspective: Tabaani is a web-based system. It is designed for bachelors who require guidance on their orientation path. It is an organized site with different types of users. The system interfaces with many collaborators such as the ministry of higher education and the embassies and another system which is the email system, the ministry and embassies' information system, and the browsers used by customers. The system provides a secure environment for all financial transactions and for the storing and retrieving of confidential user information.

2.2. Product Functions: Tabaani allows **visitors** to subscribe and to search either public or private colleges or the field of studies they desire. It also provides them with guides on how to use the platform and tips about the orientation process. After becoming a **customer**, it allows them to log in and search for their dream profession and the platform will show them all the possible road maps including the college they can go to and the number of years to finish their studies to know better about the future steps they need to take to reach their goals. They are able to watch explanatory videos for further explanation. What about **premium customers**, they can make a detailed profile upon which the platform will match their profiles with the compatible fields. They also can get in touch with experts for further exclusive details and they have access to all the scholarships available at the moment in different places around the world. The system sends emails to customers whenever an update took place.

2.3. *User Characteristics:* The three main groups of Tabaani are: visitors, customers, and premium customers. The **visitors** represent whoever visits the website; can be a parent, or a bachelor... the customers are bachelors that have accounts and that are willing to know further details about the orientation process. The premium customers are customers (bachelors) who pay fees for exclusive offers and features such as contacting experts, learning more about scholarships... For all users, the amount of training needed is none since the level of technical expertise and educational background is unknown. The only skill needed is the ability to browse a website.

2.4. *General constraints:* This system provides web access to all clients. The interface will be intuitive and user-friendly enough so that no training is required by users. All online financial transactions and the storing of confidential user information will be done in a secure and safe environment. Persistent storage for membership and inventory information will be maintained.

2.5. *Assumptions and Dependencies:* To use Tabaani's platform, the Windows operating system must be available on the hardware designated for the software product, and an internet connection.

3. System Features and Requirements:

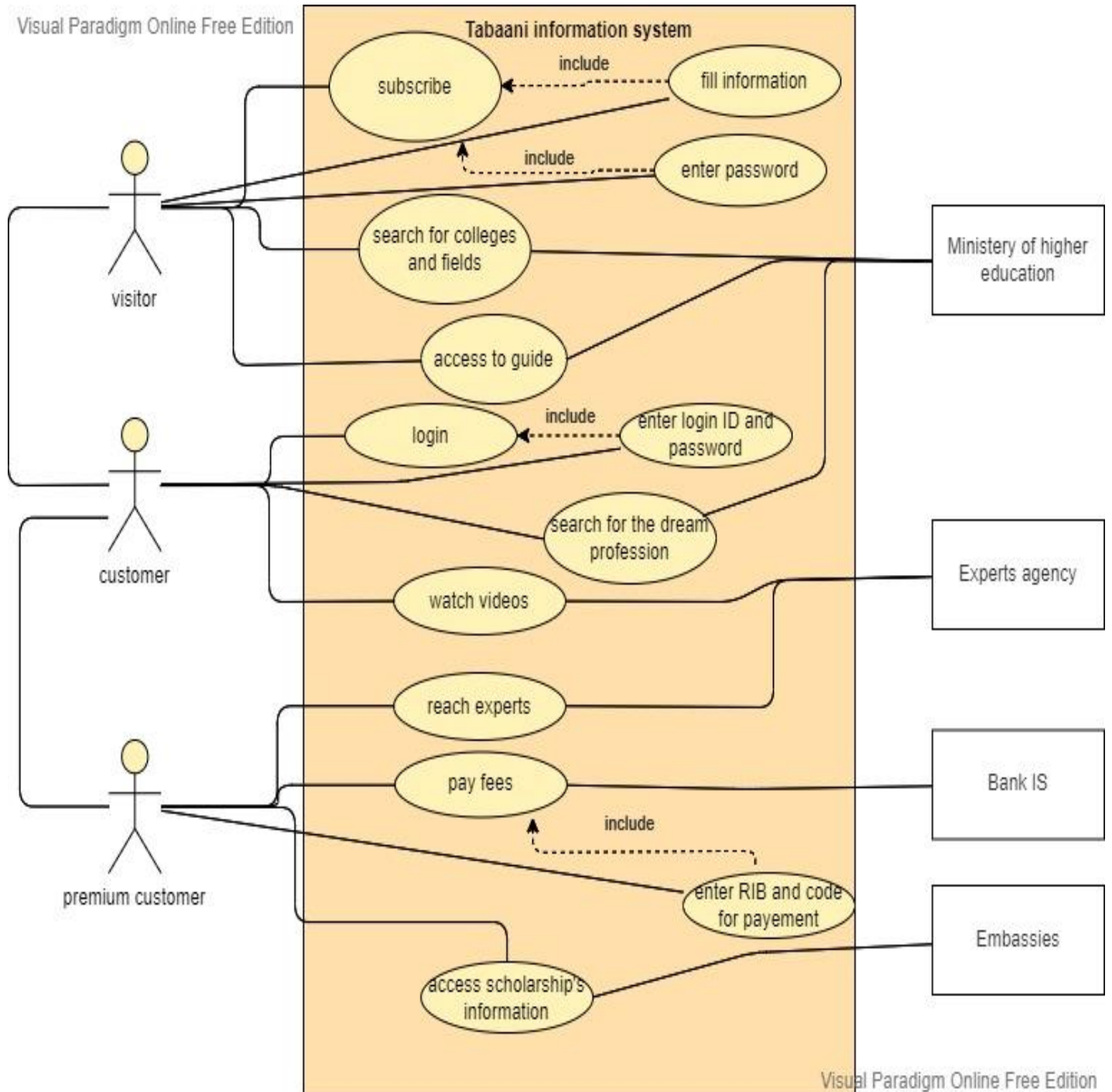
3.1. Functional requirements:

- 3.1.1. The system shall allow the visitor to subscribe and create an account:
 - 3.1.1.1. The system shall ask for the following information: full name, email address, phone number, location, and password twice.
 - 3.1.1.2. The system shall send a verification email.
 - 3.1.1.3. The system shall allow the visitor to search public/private colleges or the field of study.
 - 3.1.1.4. The system shall allow the visitor to have access to the orientation process guide.
 - 3.1.1.5. The system shall record the user's information for future use.
- 3.1.2. The system shall allow the customer to log in.
 - 3.1.2.1. The system shall ask the customer to enter his/her identifier and password.
 - 3.1.2.2. The system shall allow the customer to search for the road of his dream profession.
 - 3.1.2.3. The system shall allow the customer to watch explanatory videos.
- 3.1.3. The system shall allow the premium customer to pay online and access exclusive features:
 - 3.1.3.1. The system shall allow the premium customer to enter his card number and code in order to pay fees.
 - 3.1.3.2. The system shall allow premium customers to make a detailed profile upon which the platform will match their profiles with the compatible fields.
 - 3.1.3.3. The system shall allow premium customers to reach experts for professional pieces of advice.
 - 3.1.3.4. The system shall provide the premium customers with all necessary details about available scholarships.

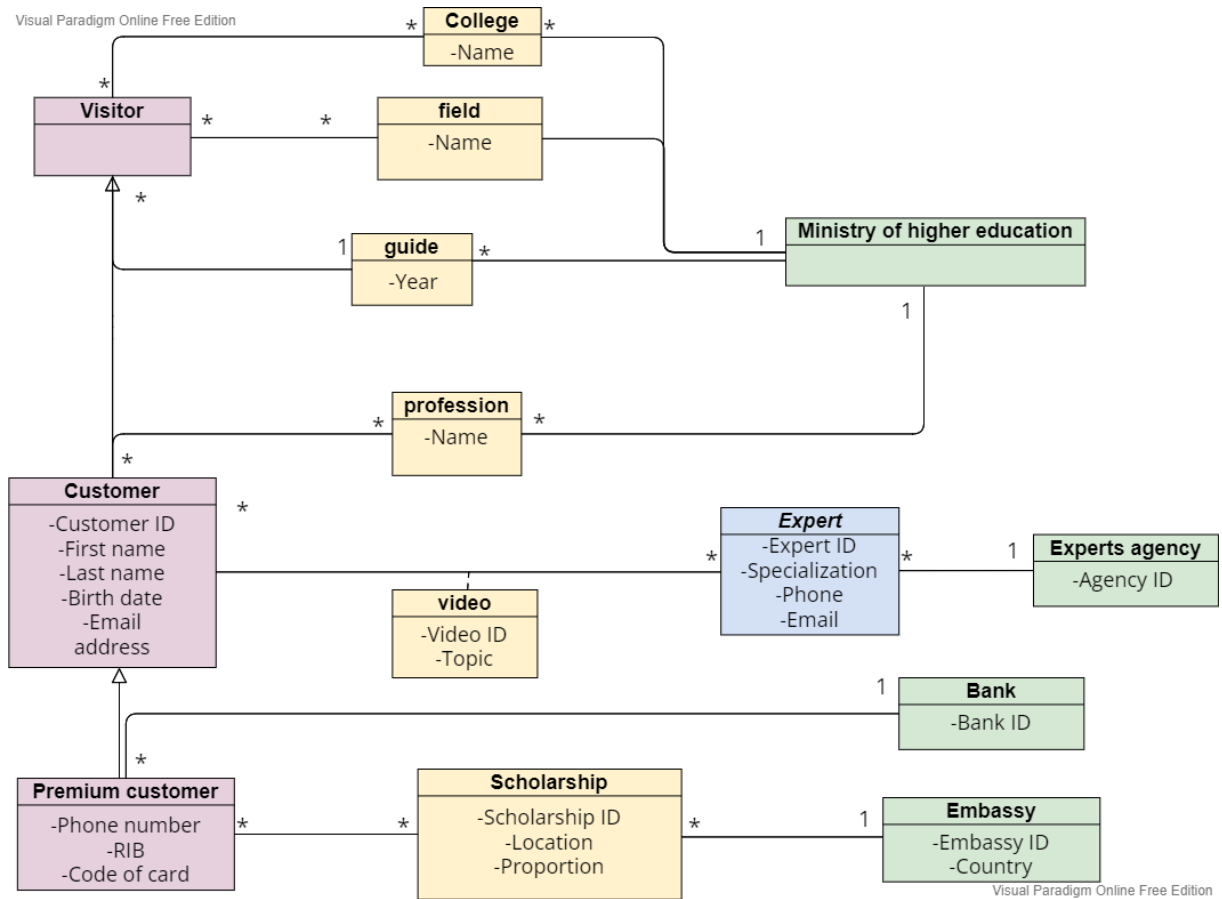
3.2. Non-functional requirements:

- 3.2.1. The system shall provide web access for all system users.
- 3.2.2. The system shall provide persistent storage for membership information, guides, scholarships, experts' videos, fields, colleges, and payment information.
- 3.2.3. The system shall be always available and active for use.
- 3.2.4. The system shall provide an intuitive user interface that requires no training.
- 3.2.5. The system shall be user-friendly and easy to use.
- 3.2.6. The system shall be free for visitors and customers and requires fees for premium customers.
- 3.2.7. The system shall provide a secure environment for financial transactions and for the storage of confidential user's information.
- 3.2.8. The system shall be quick and have well organized information.

4. System design: use case diagram:



5. System design: class diagram:



6. *Relational schema:*

Visitor (#year)

Guide (year)

College (name)

Field (name)

Profession (name)

Customer (customerID, #year, firstname, lastname, birthdate, emailaddress)

Video (#customerID, #expertID, videoID, topic)

Expert (expertID, specialization, phone, email, #agencyID)

Experts_agency (agencyID)

Premium_cutomer (customerID, phonenumber, RIB, codeofcard, #bankID)

Scholarship (scholarshipID, location, proportion, #embassyID)

Bank (bankID)

Embassy (embassyID, country)

7. *Structured Query Language (SQL):*

- **SQL DDL:**

CREATE DATABASE Tabaani ;

CREATE TABLE visitor (

Year int (4) **NOT NULL**

FOREIGN KEY (year) **REFERENCES** guide(year)

);

CREATE TABLE guide (

Year int (4) **NOT NULL**

PRIMARY KEY (year)

);

CREATE TABLE college (

Name varchar (50) **DEFAULT NULL**

PRIMARY KEY (name)

);

CREATE TABLE Field (

Name varchar (50) **DEFAULT NULL**

PRIMARY KEY (name)

);

```
CREATE TABLE Profession (
Name    varchar (50) DEFAULT NULL,
PRIMARY KEY (name),
);
```

```
CREATE TABLE Customer (
CustomerID    int (8)          NOT NULL,
Year          int (4)          NOT NULL,
Firstname     varchar (20)     DEFAULT NULL,
lastname      varchar (20)     DEFAULT NULL,
birthdate     DATE             NOT NULL,
email address varchar (100)    NOT NULL,
PRIMARY KEY (CustomerID)
FOREIGN KEY (year) REFERENCES guide(year)
);
```

```
CREATE TABLE Video (
CustomerID    int (8)          NOT NULL,
ExpertID     int (8)          NOT NULL,
VideoID      int (8)          NOT NULL,
Topic        varchar(50)      DEFAULT NULL,
PRIMARY KEY (CustomerID, expertID)
);
```

CREATE TABLE expert (

ExpertID int (8) **NOT NULL,**
 Specialization varchar (20) **DEFAULT NULL,**
 phone int (8) **NOT NULL,**
 email varchar (100) **DEFAULT NULL,**
 AgencyID int (8) **NOT NULL,**

PRIMARY KEY (ExpertID)

FOREIGN KEY (AgencyID) **REFERENCES** Experts'agency (agencyID)
);

CREATE TABLE experts'agency (

AgencyID int (8) **NOT NULL,**
PRIMARY KEY (AgencyID)
);

CREATE TABLE Customer (

CustomerID int (8) **NOT NULL,**
 RIB int (30) **NOT NULL,**
 Phonenumner int(8) **NOT NULL,**
 Codeofcard int(8) **NOT NULL,**
 BankID int (8) **NOT NULL,**

PRIMARY KEY (CustomerID)

FOREIGN KEY (bankID) **REFERENCES** bank(bankID)
);

```

CREATE TABLE scholarship (
scholarshipID    int (8)          NOT NULL,
location         varchar(50)      DEFAULT NULL,
promotion        int (3)          NOT NULL,
embassyID        int (8)          NOT NULL,
PRIMARY KEY (scholarshipID)
FOREIGN KEY (embassyID) REFERENCES embassy(embassyID)
);

```

```

CREATE TABLE bank (
BankID           int (8)          NOT NULL,
PRIMARY KEY (bankID)
);

```

```

CREATE TABLE embassy (
embassyID        int (8)          NOT NULL,
country          varchar(50)      DEFAULT NULL,
);

```

- **SQL DML:**

Insert into customer (customerID, #year, firstname, lastname, birthdate, emailaddress)

Values (12345678, #2021, amir, haddedi, 2001/10/25, amirhaddedi@gmail.com)

Insert into Expert (expertID, specialization, phone, email, #agencyID)

Values (01234567, Business, mohamed, hammemi, 23456789, mohamedhammemi@gmail.com, #15648129)

Insert into Embassy (embassyID, country)

Values (55555555, Germany)

Alter table customer

Add age tinyint(2)

Update customer

Set firstname=Taha

Where customerID=12345678

Select * From expert

Where specialization=Business

Select scholarshipID **From** scholarship

Where Location=US

Select * **From** video

Where topic **LIKE** orientation process

Group by topic

Order by expertID