Software Requirements Specification

Version 1.0

<<Annotated Version>>

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language institute automation

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# 1.0. Introduction

## *1.1. Purpose*

The purpose of this document is to present a detailed description of the language institute automation System. It will explain the purpose and features of the system, the interfaces of the system, what the system will do, the constraints under which it must operate and how the system will react to external stimuli. This document is intended for both the stakeholders and the developers of the system and will be proposed to the Regional Historical Society for its approval.

## *1.2. Scope of Project*

## *In this document we present a description of the Language Institute's management system, where we were asked to develop a complete system for entering people’s data and abandoning paper uses through an automation system by conducting several direct interviews and probing questions with the Institute’s director and the concerned employees and seeing how they work in all the details and laying down the main points in this system*

## *1.3. Glossary*

|  |  |
| --- | --- |
| **Term** | **Definition** |
| Database | Collection of all the information monitored by this system. |
| employee | Anyone managing the system and its data . |
| teacher | Anyone teaching at the institute . |
| student | Anyone who register in some course at the institute |
| backup | A copy of the data in case of data loss . |
| Software Requirements Specification | A document that completely describes all of the functions of a proposed system and the constraints under which it must operate. For example, this document. |
| Stakeholder | Any person with an interest in the project who is not a developer. |
| User | Employee , teachers and students |

## *1.4. References*

IEEE. *IEEE Std 830-1998 IEEE Recommended Practice for Software Requirements*

*Specifications.* IEEE Computer Society, 1998.

## *1.5. Overview of Document*

The next chapter, the Overall Description section, of this document gives an overview of the functionality of the product. It describes the informal requirements and is used to establish a context for the technical requirements specification in the next chapter.

The third chapter, Requirements Specification section, of this document is written primarily for the developers and describes in technical terms the details of the functionality of the product.

Both sections of the document describe the same software product in its entirety, but are intended for different audiences and thus use different language.

# 2.0. Overall Description

## *2.1 System Environment*

**Figure**

**1**

**-**

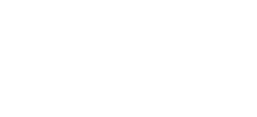
**System Environment**



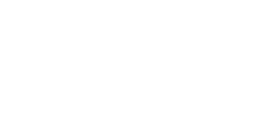
employee



teacher



Student registering



teacher data



language institute automation



student

The language institute automation has three active actors. The employee , teacher, or student accesses the system through the Internet or its application. Any employee registers the new students, as well as the teachers' data, the teacher records the students ’attendance and grades

As for the student, he goes to the system via the Internet to inquire or reserve the available courses

## *2.2 Functional Requirements Specification*

This section outlines the use cases for each active actor .

### 2.2.1 employee Use Case

#### Use case: **register a new student**

**Diagram:**



employee



Student registering

##### Brief Description

The employee record all students' information that is dealt with, and the process is carried out

##### Initial Step-By-Step Description

1-Students are sorted according to the language they want to learn.

The required language (English - French - German) is determined and a test is conducted for students to sort them for the appropriate level (beginner - intermediate - advanced - TOEFL).

2- Student data is entered on the computer and stored (name - age - study - residence - phone number - the course to be registered - date of application - student status).

3- Register the course fee.

4- Record the start and end date of the course.

5- Handing over the course book, noting that the basic condition for purchasing the book is pre-registration with the institute.

6- The student can decide the appropriate time for him to attend the course (morning - evening).

**Xref:** Section 3.2.1, Search Article

### 2.2.2 employee Use Case

### 

#### Use case: record teachers data

**Diagram:**



employee



Teacher data recording

**Brief Description**

The employee record all teachers' information that is dealt with, and the process is carried out

##### Initial Step-By-Step Description

1. Ask about previous experiences and certificates and enter them as data into the computer.
2. Enter personal data (name - residence - phone number - age - courses to which he is subject - certificates obtained).
3. A training course is conducted for the selected teachers by the institute's administration, and the teacher is kept under probation for a period of six months.

**Xref:** Section 3.2.2, Communicate

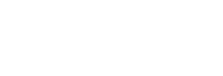
### 2.2.3 teacher Use Case

#### Use case: review student marks

**Diagram:**



teacher



Review student marks

**Brief Description**

The teacher follow the students statues and their tests and attendences.

##### Initial Step-By-Step Description

1. The teacher records the student’s attendance during the course
2. Adds marks resulting from interim and final tests
3. According to the final score, the level to which the student must move is determined

**Xref:** Section 3.2.2, Communicate

### 2.2.4 student Use Case

#### Use case: Reservations and inquiries

**Diagram:**



student



#### Reservations and inquiries

**Brief Description**

The student get to the institute website and register or see the details about the courses

##### Initial Step-By-Step Description

1. The student wishing to register for the course can book an appointment to take a placement test either through the Internet (the page of the Al-Noor Language Institute) or visit the institute directly and book an appointment for the test.
2. The institute also takes into account students ’times, as there are more than one appointment for lessons (morning - evening) for the student to inquire about and register at a time convenient for him.
3. The student can choose the appropriate time for him to attend the course (morning - evening).

**Xref:** Section 3.2.3, Add Author; Section 3.2.5 Update Person

## *2.3 User Characteristics*

The user is expected to be Internet literate and be able to use a search engine.

The user is expected to be Windows literate and to be able to use button, pulldown menus, and similar tools.

The detailed look of these pages is discussed in section 3.2 below.

## *2.4 Non-Functional Requirements*

The ability of the system to work on a network infrastructure

High system speed and reliability

Back up student and teacher data

# 3.0. Requirements Specification

## *3.1 External Interface Requirements*

## *3.2 Functional Requirements*

The Logical Structure of the Data is contained in Section 3.3.1.

### 3.2.1 employee use case

|  |  |
| --- | --- |
| **Use Case Name** | :  **register a new student** |
| **XRef** | Section 2.2.1, Search Article SDD, Section 7.1 |
| **Trigger** | The employee receives registration requests from students |
| **Precondition** | A network connected to all the institute |
| **Basic Path** | 1-Students are sorted according to the language they want to learn.  The required language (English - French - German) is determined and a test is conducted for students to sort them for the appropriate level (beginner - intermediate - advanced - TOEFL).  2- Student data is entered on the computer and stored (name - age - study - residence - phone number - the course to be registered - date of application - student status).  3- Register the course fee.  4- Record the start and end date of the course.  5- Handing over the course book, noting that the basic condition for purchasing the book is pre-registration with the institute.  6- The student can decide the appropriate time for him to attend the course (morning - evening). |
| **Alternative Paths** | In step 1, a window appears with a button (student registration) and the following step appears several options for selecting language  In step 2 The student data (name, age, number, address, level, level) is entered in a specific form  3 Window to determine if the student pay fees fully or part  5 is to determine if books are delivered and paid for it  6 The interface contains a date and time to determine the right time for the student |
| **Postcondition** | Add student data for database. |
| **Exception Paths** | The employee canceled the operation based on the desire of the student |
| **Other** | None |

### 3.2.2 employee use case

|  |  |
| --- | --- |
| **Use Case Name** | Record teachers data |
| **XRef** | Section 2.2.2, Submit Article; Section 2.2.3, Submit Review SDD, Section 7.2 |
| **Trigger** | The employee receives the teachers' data |
| **Precondition** | A network connected to all the institute |
| **Basic Path** | 1-Ask about previous experiences and certificates and enter them as data into the computer.  2- Enter personal data (name - residence - phone number - age - courses to which he is subject - certificates obtained).  3- A training course is conducted for the selected teachers by the institute's administration, and the teacher is kept under probation for a period of six months. |
| **Alternative Paths** | In step 1 a window appears that contains information about the required experiences, and in the following step, the teacher's data (name, age, number, address, certificates, experiences) is entered through a specific form.  In Step 2, determine the timing and mechanism of the training courses |
| **Postcondition** | Add teacher data to the database |
| **Exception Paths** | The teacher does not meet the required conditions during the trial period |
| **Other** | None |

### 3.2.3 teacher Use Case

|  |  |
| --- | --- |
| **Use Case Name** | review student marks |
| **XRef** | Section 2.2.4, Update Author SDD, Section 7.3 |
| **Trigger** | The teacher follows the case of students |
| **Precondition** | The system is capable of linking marks with students' records |
| **Basic Path** | 1. The teacher records the student’s attendance during the course 2. Adds marks resulting from interim and final tests 3. According to the final score, the level to which the student must move is determined |
| **Alternative Paths** | Alternative In step 1, the presence of the student is determined through a specific interface of time and the names of students present  In step 2 Window, the marks table is shown in the interim and final tests, and is modified by the teacher  3 system identifies students' levels through the average student grades during the course. If there are 50% of total marks the student passes to the higher level |
| **Postcondition** | Add students' marks for their records in the database |
| **Exception Paths** | not attending the student for one tests |
| **Other** | none |

### 3.2.4 student Use Case

|  |  |
| --- | --- |
| **Use Case Name** | Reservations and inquiries |
| **XRef** | Section 2.2.4, Update Reviewer SDD, Section 7.4 |
| **Trigger** | The student communicated and asked the institute for the test date |
| **Precondition** | The system is connected to the Internet to receive student requests |
| **Basic Path** | 1. The student wishing to register for the course can book an appointment to take a placement test either through the Internet (the page of the Al-Noor Language Institute) or visit the institute directly and book an appointment for the test. 2. The institute also takes into account students ’times, as there are more than one appointment for lessons (morning - evening) for the student to inquire about and register at a time convenient for him. 3. The student can choose the appropriate time for him to attend the course (morning - evening). |
| **Alternative Paths** | In step 1, the student visits the institute's website and inquires about the details of the existing courses or booked an appointment for a language level test through a specific interface  2 ,The system displays the dates of the available courses for the student to choose the appropriate time for him |
| **Postcondition** | Add student data to the database |
| **Exception Paths** | Network connection disconnected before data is completed |
| **Other** | None |

## *3.3 Detailed Non-Functional Requirements*

3.3.1 The ability of the system to work on a network infrastructure :

The main objective of this restriction is to facilitate the reservation and inquiry process received as a functional requirement. The registration system also helps to increase the efficiency between departments of the institute each other and between the institute and its students.

**3.3.2** High system speed and reliability:

It is imperative to have in such an institute a system that guarantees the confidentiality of students and teachers' data and archives for them, in addition to the speed and flexibility of the system’s performance and work.

3.3.3 Back up student and teacher data:

The system can backup all students and teachers' data based on the employee in charge ... The results are stored in a database of the institute that can be used for many things at later times.

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