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| **المملكة العربية السعودية**  **وزارة التعليم**  **جامعة الإمام محمد بن سعود الإسلامية**  **كلية علوم الحاسب والمعلومات** | A description...  **Second term 1441/2020** | **KINGDOM OF SAUDI ARABIA**  **Ministry of Education**  **Al-Imam Mohammad University**  **College of Computer & Information Sciences** |
| **Software Engineering (CS- 310)**  **BSCS- Section: 171**  **Project-Phase No: 1**  **DB Center**  **(Specification)** Submitted By | | |
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< DB Center >

Software Development Plan

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# Introduction

This section will provide you with an overview and a scope description of all the content of the SRS Document

The goal of this document is to described and list of abbreviations and definitions that are provided.

## Purpose

The purpose of this document is to provide a complete description of the requirements for the ” DataBase Center ”

(DB-Center), This document is primarily intended to be submitted to a customer for its approval  
and a source for developing the first version of the system for the development team.

## Scope

The development team thought it will speed up the process and save time and money for the government to have an online system that saves, store and keep track of the Citizens information online. the DB Center will allow the following Functionality online: To Search a citizen, to display a report about a citizen, To update citizen information, To create a DataBase. the DB Center is expected to help the government by lowering the average time for a citizen to do a single task and to reduce the number of employees and the budget.

## Definitions, Acronyms, and Abbreviations

|  |  |
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| **Term** | **Definition** |
| User | Anyone who is interacting with the web-based system |
| High-Level Management | Top-level managers, or top managers, are also called senior management or executives. Will have permission to see almost everything about the citizen. |
| Middle-Level Management | Middle-level managers, or middle managers, are those in the levels below top managers, Will have permission to see the relevant information that he/she needs to see in there field about the citizens |
| Low-Level Management | First-level managers are also called first-line managers, shop-level managers, or supervisors. Will have permission to see only in one field of information that he/she needs to see about the citizens. |
| Admin/Administrator | an Administrator who is given the authorization to manage, organize, and supervise the way the system functions. |

## References

1. IEEE Software Engineering Standards Committee, “IEEE Std 830-1998, IEEE Recommended  
   Practice for Software Requirements Specifications”, October 20, 199

## Overview

This SRS document will let the customer and developing team understand and have good knowledge about requirements and specifications in detail. As we going through this document we will approach and elucidate general description as the first chapter and specific requirement as the second chapter. For the first chapter, the general description will explain the product perspective, product functions, user characteristics, and assumptions, and Dependencies. In the second chapter, the specific requirement it's important to go in detail through functional requirements and non-functional requirements to have the complete picture of the system.

# General Description

The DB Center has many affecting factors that will make it hard to implement, one of the factors is how to store citizens information for the system, the system will search for citizen by the id number and it will display the information about the citizen.

**2.1 Product Perspective**

The DB Center is a Web-Base System. The system is connected to a database through a server, The system provides a secure environment for all information of the citizens and for storing and retrieving the information

Diagram

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Figure 1: system overview

## Product Functions

The DB Center will allow the government to save more money and time and display citizen information more efficiently and effectively, after the government worker login into the system the person will write the id of the citizen to display a report with only relevant information to the worker field of work, the higher the person is in the hierarchy of the government the more information it will display in the report.

## User Characteristics

The DB Center has three main groups and two subgroups in the system citizens, employees which consist of two parts: citizen services, executives, and the administrator.

The citizen can only register, update minor information in the profile.

The employee group has two subgroups they have a lot of shared features like searching for a citizen by their id number and the citizen relevant information will be displayed on the screen for the citizen services employees. All the information about the citizen will be displayed for the executives. The citizens and employees groups their educational level is unknown and all of them don’t need any training just the ability to browse a website.

The administrators are managing the entire system, if there is incorrect information within the system, also they can manage the information for each citizen.

## General Constraints

The system provides web access for the citizens and the employee's functions, the user interface will be simple enough for everyone, so there is no training is required, all citizen's information will be stored in a secure environment, persistent storage of citizen information will be maintained.

## Assumptions and Dependencies

One assumption about the product is that if an employee how is working for the government went to change his information in his own profile will need to logout of their account and then log in to his citizen account to change the minor information.

# Specific Requirements

This section includes all functional and quality requirements of the system, it will describe all the features of the system in detail.

## External Interface Requirements

This section will describe the inputs and outputs and hardware from the system in detail. Also, the prototype of the software and communication interface of the user interface will be provided.

## User Interfaces

### When a user enters our website they will choose ether which type of user are they Citizen, Executive, or Citizen Services figure 2 User Type page then they will go to the login page figure 3 login page after they enter the username and password the website will move them to the next page like the following,

if they are a citizen the website will move them to their page and they can just edit general information about them figure 4Citizen profile for the Citizen.

### If they are Executive the web-site will move them to the search page and they can search by a citizen ID number and they will see information about the citizen

### If they are citizen service employees the web-site will move them to the search page and they can search by a citizen ID number and they will see Specific information depend on where they work in figure 5 Search function & Citizen profile for citizen service.

Graphical user interface, diagram, application

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Figure 2: User Type page

Graphical user interface, application

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Figure 3: login page

Graphical user interface, text, application, email

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Figure 4: Citizen profile for the Citizen

Graphical user interface, text, application

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Figure 5: Search function & Citizen profile for citizen service

## Hardware Interfaces

### Since our database server is managed by the underlying operating system on the website we don’t have any direct hardware interface

## Software Interfaces

The website communicates with the users to get the name of the citizen then the server checks in the Database for the citizen name and user access and give him the information depend on user access figure 1 System overview.

## Functional Requirements

This section describes the specific features of the software project. If desired, some requirements may be specified in the use-case format and listed in the Use Cases Section.

### **FR1: Database Creation**

Function: Create DataBase of Citizen Information.: to store citizen information.

Description: The system shall save information of the citizens.

Inputs: Citizen’s Information.

Source: Citizens

Action: Create DataBase will connect to the local DataBase and initialize them then store the data.

Requirement: Citizen's Information.

Pre Condition: Will check if there is someone with the same id number or name.

Post Condition: None

Outputs: N/a

Error Handling: If the id and the name are stored in the system before the system they ignore the new information and continues.

### **FR2: User type**

Function: User Type: to know which type of access is the user.

Description: The system shall allow users which type to chose of the user between the citizens and the employees

Inputs: None

Source: mouse.

Action: The system will save the user type to connect to the database.

Requirement: N/A

Pre Condition: none

Post Condition: To check if the visitor chooses from the choices.

Outputs: none

Error Handling: If the visitor didn’t choose form choices they will not be able to proceed to the next page. They have to choose.

### **FR3: Log in Page**

Function: login page: to connect to the database.

Description: The system should able users to enter the username and the password.

Inputs: Username and Password.

Source: keyboard

Action: After the username and Password the system will check in the database for the correct UserName and Password.

Requirement: Type of user

Pre Condition: If the username the password is not empty or has spaces in them.

Post Condition: None

Outputs: successfully log in

Error Handling: if the username or the password didn't match any username or password in the database the access will be denied.

### **FR4: Search Page**

Function: Seach page: to find citizen information.

Description: The system shall able The employees to enter the Citizen National ID Number.

Inputs: Citizen National ID number.

Source: Citizens.

Action: The system will take the Entered Citizen National ID Number and will check if there the same Citizen National ID number in the database

Requirement: Type of user

Pre Condition: all information must be all numbers, to check what type of employee the user is.

Post Condition: to check if the information is just what the employee has access to

Outputs: Citizen information

Error Handling: if the entered information is not all numbers the system will not continue and

### **FR5: Profile information**

Function: The system should be able the employee to see a citizen profile

Description: The system shall save information of the citizens.

Inputs: None

Source: Citizens

Action: The system will connect to the database to find the information to be displayed on the screen.

Requirement: Type of user

Pre Condition: To check if the employee has access to the database and to check that type of employee the user is.

Post Condition: To check only the correct information has been displayed on the screen base on employee access.

Outputs: Information on a citizen.

Error Handling: if the incorrect information will is displayed the system will ask to enter the national id number again.

### **FR6: Forget Password**

Function: Forget the password: reset the password if the user.

Description: The System shall reset the password if the user forgets the password.

Inputs: Username, Email.

Source: N/A

Action: The system will rest the password if the user forgets it.

Requirement: Type of user

Pre Condition: To check if an email has the right domain name.

Post Condition: To check if the password is different than the one in the past.

Outputs: New password

Error Handling: If the password is not different, the system will ask for a diffract password.

### **FR7: View Profile**

Function: View profile: to display profile information.

Description: The system shall able The citizen to view their information in their profile.

Inputs: None

Source: Database

Action: The system will display citizen information from the database.

Requirement: Type of user

Pre Condition: To check if the citizen has access to the database.

Post Condition: To check if the right information is displayed.

Outputs: information about the citizen.

Error Handling: if the wrong information is displayed an error message will appear.

### **FR8: Edit General information**

Function: Edit general information : To make the information new

Description: The citizen shall be able to change some of their current general information.

Inputs: Address

Source: keyboard.

Action: The citizen will enter an address the system will change the citizen address in the database.

Requirement: Type of user

Pre Condition: If the citizen has the correct user access.

Post Condition: To check the entered information follow the correct address formating.

Outputs: New address.

Error Handling: if the entered information doesn't follow the right formation the system will ask to enter the address in the right formating.

### 

## Non-Functional Requirements

### **NFR1: Reliability**

* The application should be reliable to perform the business, ie when the user performs some important action it should be acknowledged with a confirmation.

### **NFR2: Scalability**

* The system should able to adapt itself to increased usage or able to handle more data as time progress.

### **NFR3: Security**

* Employees shall be forced to change their password the next time they login in if they have not changed it within the length of time established as “Password expiration duration ”.
* The software must ensure the integrity of the citizen account information.

### **NFR4: Useability**

* Users should be able to understand the flow of the system easily, users should able to use

The system without any guidelines or help from experts/manuals.

## Use case Diagram

A use case diagram it's one of the simplest representations of a user's interaction with the system that shows the relationship between the user and the different use cases in which the user is involved.

Diagram

Description automatically generated

# Team Members Contributions

|  |  |
| --- | --- |
| **Person** | **Roles and Responsibilities** |
| Ali Alhawas, Coordinator | Section 1 , section 2 Use case Diagram |
| Abdulrahman Mubasher Alghurm | Design |
| Nasser Hamad Alkhurayji | Functional and non-Functional Requirement |
| Anas Eissa Alzhrani | Section 2 |
| Nawaf Khalid Aldaham | Section 3 |

# Conclusion

To conclude it, this SRS document divided into three sections that most requirement document has. First, an introduction that explains the scoop and an overview of the document. Then project description which is a general description of the DB Center project that includes user characteristics and general constraints. Finally, specific requirements that are divided into two categories functional and nonfunctional that is important to understand the product requirements by answering what and how the system will do all covered in detail in the SRS document.