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# **Software Requirements Specification**

**For**

**Digion Smart Solutions** (An Automated HR and Payroll Management System)

**Version 1.0 approved**

**Prepared by:**

Daniyal Khan

Muhammad Usman

Mahad Rahat

Tayyba Saveera

**FAST Nukes, Islamabad**

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Revision History

Date	Description	Version	Author
07/10/2021	Initial Vision Document	1.0	Daniyal, Mahad, Tayyba ,Usman
15/01/2022	Refined SRS Document	2.0	Daniyal, Mahad, Tayyba ,Usman

## 1.Introduction

### 1.1.Purpose

#### 1.1.1.Abstract

Employee Database and Payroll Management System” is one of the core areas of Enterprise performance management businesses for small and mid-sized enterprises, designed to make the existing manual system automatic with the help of computerized equipment and full-edged computer software, fulfilling their requirements, so that their valuable data and information can be stored for a longer period with easy access and manipulation. The required software is easy to work with allowing companies to enhance their management and have better control. This web application can maintain and view computerized records. This project is being developed for xyz Company who wants to control and manage their employee’s data in a more appropriate and neat way. With the help of our project, they will have better management over their personal data and employee data.

#### 1.1.2.Scope

This document covers the whole definition of the HR Management System (DSS) project. It basically includes the requirements for managing the personal data and evaluating employees' performance. More specifically, our DSS (HR Management System) controls and manages the personal database such that any user with different role types as manager, admin, employee, and human resource will be able to manipulate their personal data. In addition to manipulating the personal data, our DSS will provide every user with any role type to be able to login to the system with his/her username and password or via fingerprint or facial authentication. The rest is defined in Section 1.4 of this document.

### 1.2.Document Conventions

This document uses different font sizes for distinction of headings, also the headings are numbered (whole) e.g., 1. Introduction. The subheadings are numbered with forward indentation and increased levels e.g., 1.2 Document conventions.



**1.3.Intended Audience and Reading Suggestions**

The project is supposed to be read by developers, testers, Marketing staff, project managers, users and Software Design and Architect engineers. To achieve this purpose, the software is divided into three critical parts. 1. Introduction, 2. Overall Description, 3. External Interface Requirements, 4. System Requirements and 5. Other Non-functional requirements.

**1.4.Product Scope****1. Recurring payroll services:**

- 1.1. Gross pay calculation (Basic salary, wage supplements, occasional payments, cost reimbursements, attendance management, etc.)
- 1.2. Calculation of payroll related taxes and contributions.
- 1.3. Recording and processing of garnishment (includes Federal taxes, state taxes, child support, loans, emergencies etc.)
- 1.4. Preparation of payroll slips and other outputs broken down by employees or by cost centers for managerial and operational use.
- 1.5. Data recording and processing in connection with voluntary pension and health insurance funds, reporting to the pension funds.
- 1.6. Recording of wage and labor related data (holiday and sick leave balances)
- 1.7. Providing data and info to the General ledger
- 1.8. Data reports and certificates to payroll processing (to the tax and social authorities, the Statistical office etc.)

**2. Full range of social insurance management****3. Tasks related to newcomers and departing employees****4. Annual services connected to payroll processing and social security administration****5. Preparation and submission of tax declarations****6. Payroll disbursement services:**

- 6.1. Movement of all payments calculated during the pay processing cycle.
- 6.2. Net salary, Tax, social security's etc.
- 6.3. Specified data reports for Client's accounting

7. Other services may include:

- 7.1. Cafeteria management
- 7.2. Tax advisory
- 7.3. Labor management

## **1.5. References**

[https://www.academia.edu/15968878/Software Requirements Specification Human Resource Management System Sponsored by Siemens Enterprise Communication](https://www.academia.edu/15968878/Software_Requirements_Specification_Human_Resource_Management_System_Sponsored_by_Siemens_Enterprise_Communication)

IEEE 830-1998 - **IEEE Recommended Practice for Software Requirements Specifications**<sup>1</sup>

<https://developer.ibm.com/articles/an-introduction-to-uml/>

### **Abbreviations and acronyms:**

DSS: Digion Smart Solutions

SRS: Software Requirement Specification Document

HR: Human Resource

HRM: Human Resource management

HRMS: Human Resource management system

PMS: Payroll Management System

## **2. Overall Description**

### **2.1. Product Perspective**

The overall description of our project can be stated as creating and managing the database, developing a friendly user interface to manipulate the database, and providing an authentication mechanism to safely accomplish tasks mentioned in section 1.4. The system shall be working on three platforms i.e., Android, iOS and Desktop.

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<sup>1</sup><https://standards.ieee.org/standard/830-1998.html#:~:text=IEEE%20830%2D1998%20%2D%20IEEE%20Recommended%20Practice%20for%20Software%20Requirements%20Specifications&text=Replaced%20by%20ISO%2FIEC%2FIEEE,sample%20SR%20outlines%20are%20presented.&text=Guidelines%20for%20compliance%20with%20IEEE%2F%20EIA12207.>

DSS shall be used by four types of employees that are stated as:

- i.Admin
- ii.Accounts Manager
- iii.HR manager
- iv.Employee.

Every user shall be able to access the desired functionality of the system by logging in via different options that are stated as: Facial recognition, PIN code, Password, Fingerprint authentication. The data of the users shall be stored on a local storage device as well as an Online Cloud Storage device.

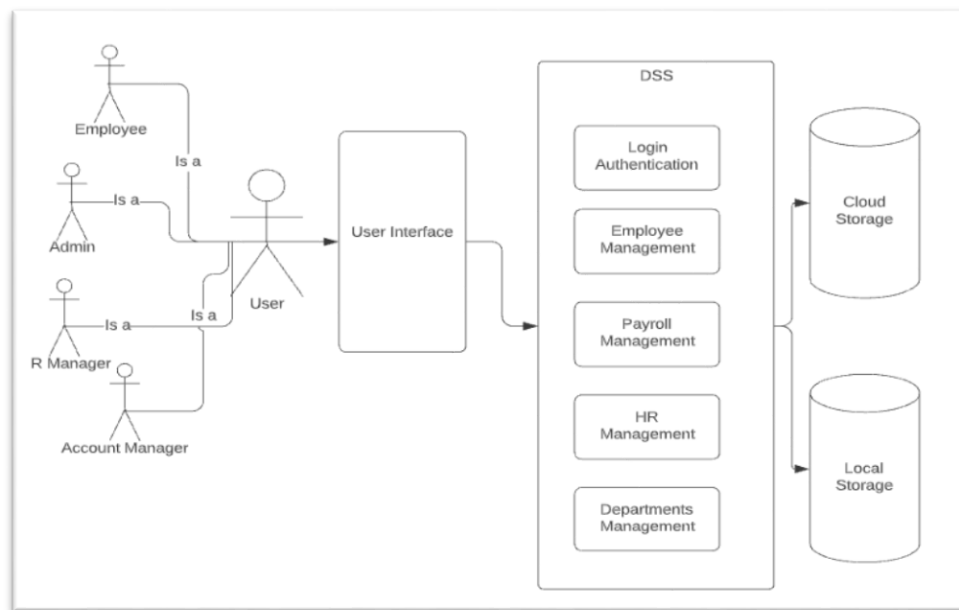


Figure 2.1: General Use case diagram just to explain the user-system interaction on a very basic level.

## 2.2.Product Functions

DSS will be used by four types of employees' of Xyz Company. These types who have different roles can be stated as admin, Accounts manager, HR manager and employee. Every user enters the main authentication page and after that, the system will grant them authorization. After being authorized according to their permissions (role type) users will perform their tasks. The main tasks that user shall perform are:

- i.Employee Management (HR manager)
- ii.Add, Delete, Update, and Suspend an Employee
- iii.Add Employees' Bonuses on Uptime, Achievements

iv. Deductions from salary upon downtime

v. Leave and Holiday Management

Figure 2.2.1. Shows a DFD of Employee Management

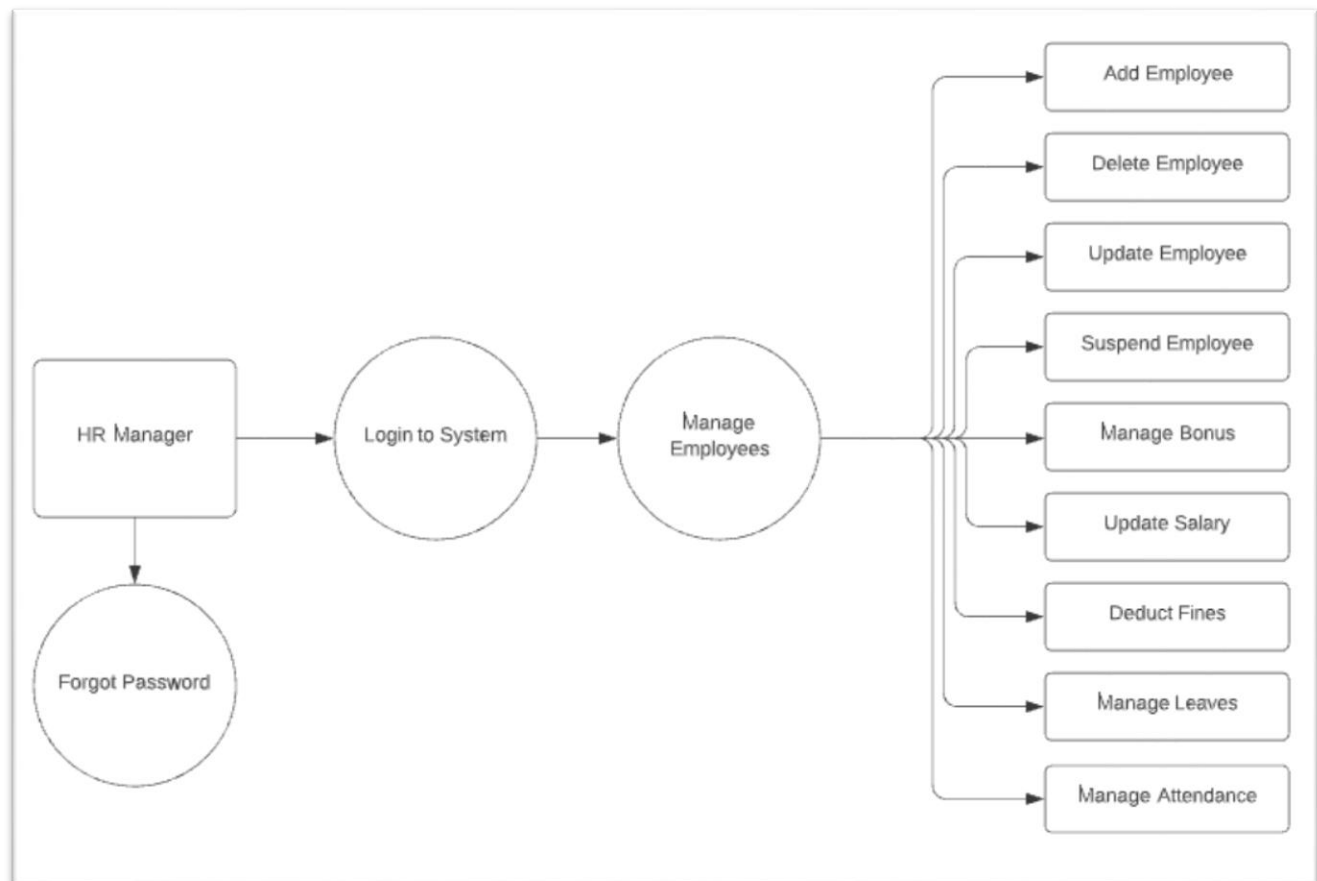


Fig 2.2.1.

1. Accounts and Employees' Finance Management (Accounts Manager)

a. Costs Management

- i. Salaries
- ii. Purchases
- iii. Bonuses

b. Revenue Management

- i. Earnings
- ii. Profits

Figure 2.2.2 shows A DFD of an Accounts Manager

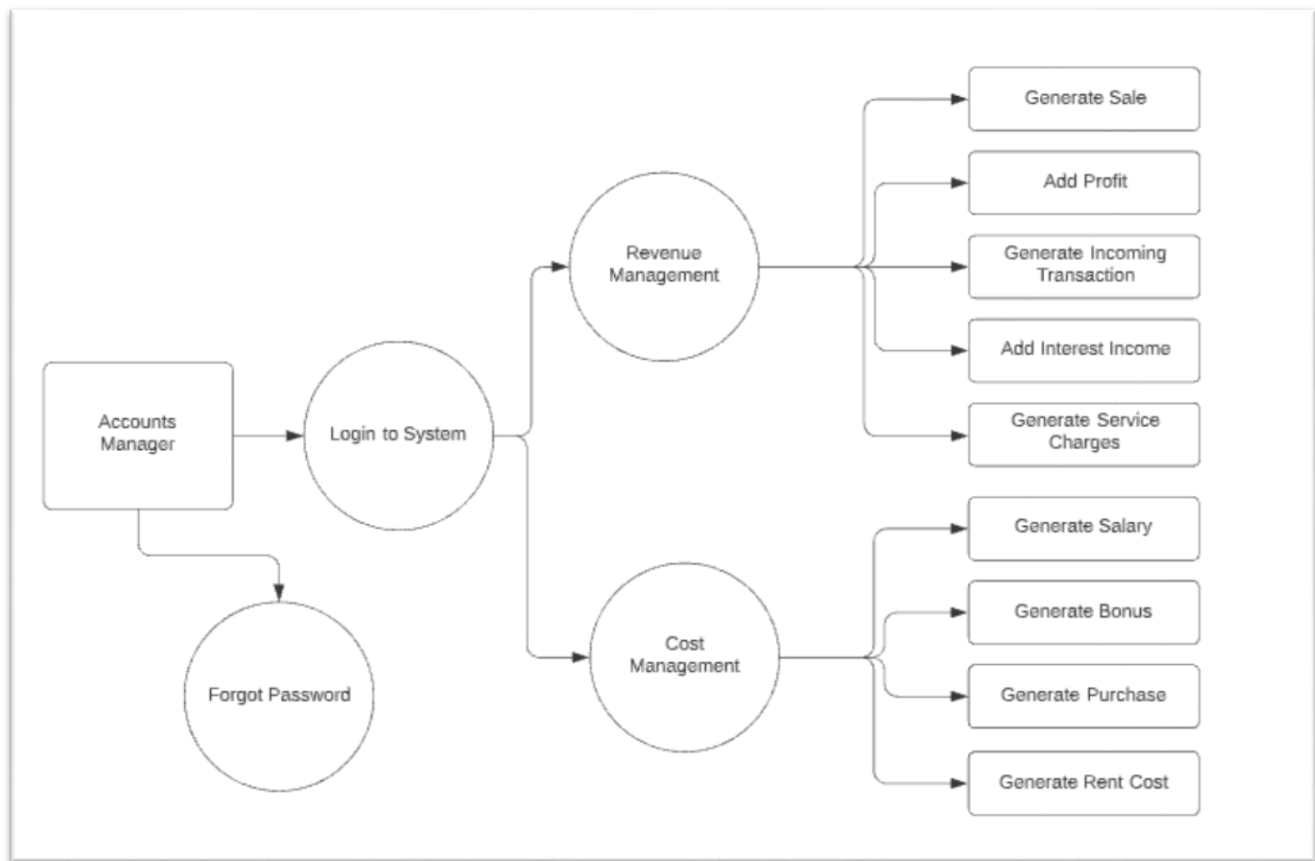


Figure 2.2.2

## 2. Payroll Management (System)

### a. Transactions

- i. Incoming
- ii. outgoing

## 3. Authorization, authentication and revocation (Admin)

## 4. Authorization, authentication and revocation (System)

## 2.3. User Classes and Characteristics

### 2.3.1. User: Importance: High

#### 2.3.1.1. Admin

#### 2.3.1.2. Accounts Manager

#### 2.3.1.3. HR Manager

#### 2.3.1.4. Employee

### 2.3.2. Payroll Ledger Importance: Highest

**2.3.2.1. Pay Slip****2.3.2.2. Pay Stub****2.3.3. Transaction**

Importance: Moderate

**2.3.3.1. Incoming****2.3.3.2. Outgoing****2.3.4. Department**

Importance: Low

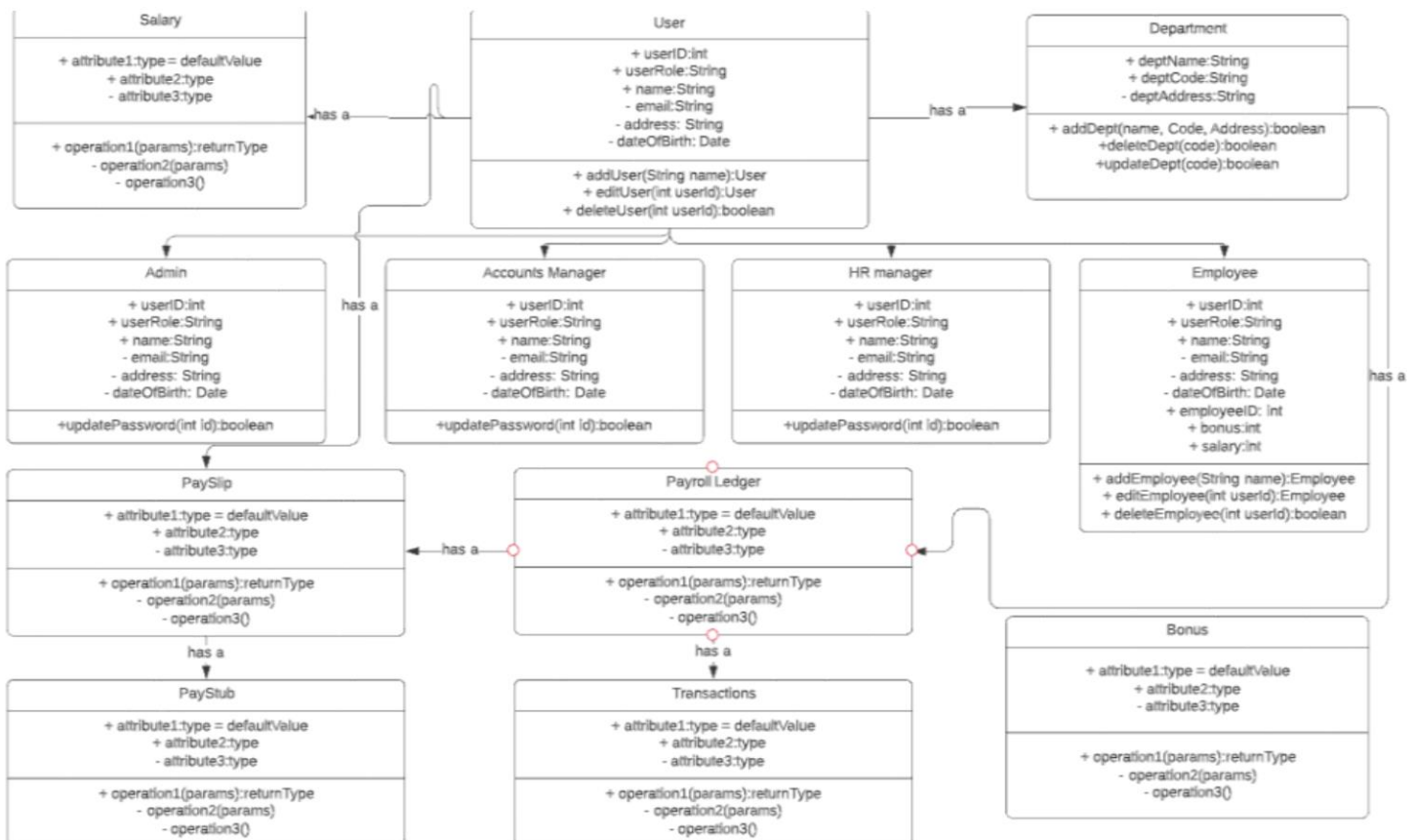
**2.3.4.1. Accounts and Finance****2.3.4.2. Human Resource****2.3.4.3. Production****2.3.4.4. Purchasing****2.3.4.5. Marketing, sales and Management****2.3.4.6. Customer Service****2.3.4.7. Research and Development**

Figure 2.3

## **2.4.Operating Environment**

The system can be operated from desktop and android. For a detailed overview, please see section 3.2.

## **2.5.Design and Implementation Constraints**

1. Only the Admin shall add or remove a department
2. Each Employee must have a phone with Camera and GPS

## **2.6.User Documentation**

[https://www.academia.edu/15968878/Software\\_Requirements\\_Specification\\_Human\\_Resource\\_Manage\\_m](https://www.academia.edu/15968878/Software_Requirements_Specification_Human_Resource_Manage_m)  
<https://developer.ibm.com/articles/an-introduction-to-uml/>

See section 1.5

## **2.7.Assumptions and Dependencies**

**2.7.1.**This System is developed using a component-based software engineering approach. The product must have an interface which is simple enough to understand.

**2.7.2.**All necessary hardware and software are available for implementing and use of the tool

**2.7.3.**The proposed system would be designed, developed and implemented based on the software requirements specifications document.

**2.7.4.**End users should have basic knowledge of computer and we also assure that the users will be given software training documentation and reference material. The system is not required to save generated reports

## **3.External Interface Requirements**

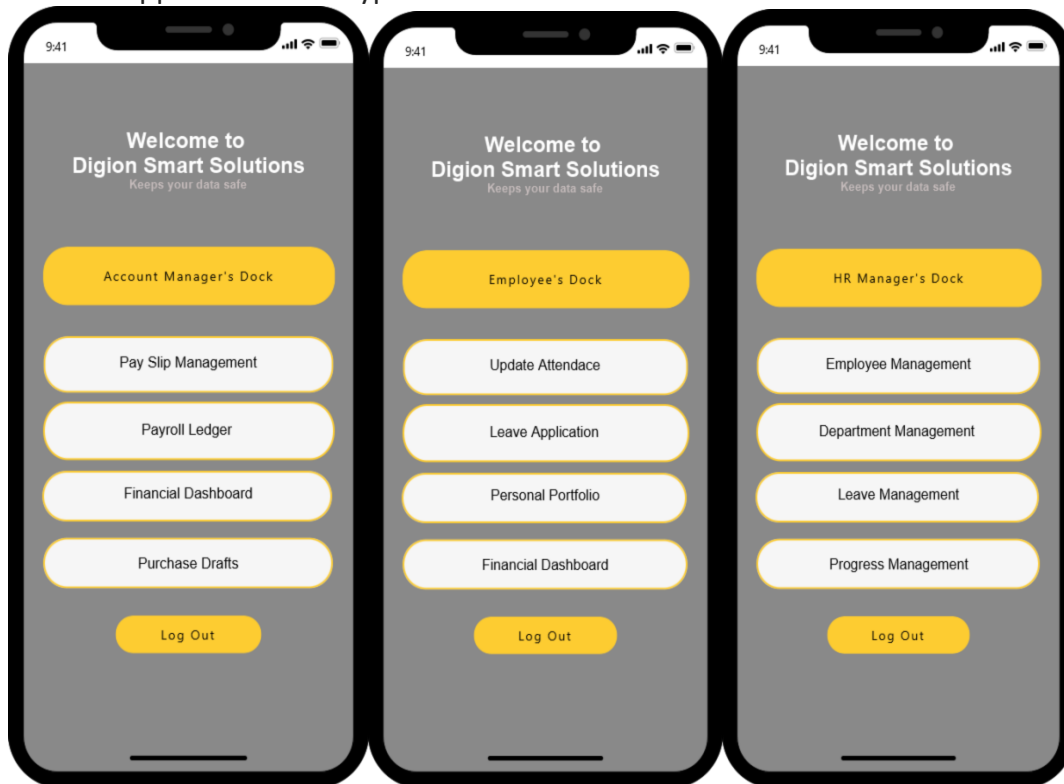
### **3.1.User Interfaces**

**3.1.1.**Logical Characteristics: The Graphical User Interface of the product hall be designed in ReactJS, taking advantage of its highly efficient and good to have core features. The ReactJS

design will remove most limits of access because the application would use a framework of ReactJS i.e., React Native allowing access and native feel on Android.

**3.1.2.Aspects:** The system shall have content that will only be viewable to the user if they are logged in correctly. Also, there shall be different types of users having different accessing/viewing/modification privileges. For instance: ‘Employee will be able to login and mark his attendance/apply for a leave/update his progress, etc.’, ‘HR Manager will be able to verify leaves/generate attendance reports/calculate uptimes/add, delete or update employees, etc.’ also ‘Accounts Manager will be able to generate pay slips/calculate bonuses/maintain payroll ledger/send pay stubs to bank accounts etc.’ and for each user there will be different viewing perspectives.

**3.1.3.Android Application Prototypes:**



**3.1.4.Web Application Prototypes:**





### 3.2. Hardware Interfaces

3.2.1. All server-side components must execute on server-class computers. All client-side components must execute on workstation-class and personal-class computers.

3.2.2. Windows

3.2.3. IOS

3.2.4. Mac

3.2.5. Linux

3.2.6. Android

### 3.3. Software Interfaces

3.3.1. The DSS shall communicate with the GPS and Location system to identify the employee's android's current location.

3.3.2. The DSS shall communicate with the External Bank Systems to verify the employees account number and dispatch pay stubs.

3.3.3. The DSS shall communicate with the Payment system to identify available payment methods, validate the payments and process purchases.

**3.3.4.**The DSS shall communicate to the credit management system for handling financing options.

**3.3.5.**The DSS shall communicate with the National Citizen Log System (Nadra) to verify employee details.

**3.3.6.**The DSS shall communicate with External Tax system to calculate tax based on National Policies i.e. FBR's instructions.

**3.3.7.**This Third-Party System shall provide support for secured transactions to employee's bank accounts and for other payroll events.

**3.3.8.**The DSS shall exchange information retrieving and storing data from/into a database.

### **3.4.Communications Interfaces**

**3.4.1.**Communication between the client and server must be secure over HTTPS.

**3.4.2.**Email services will be used for notifications.

## **4.System Features**

### **4.1.Managerial Features:**

*Managerial bodies play an important role and serve as one of the main stakeholders in the DSS system. Without them the systems serve no purpose.*

#### **4.1.1. Adding a new employee:**

The managers (respective department) shall have the option of adding up a new employee to the DSS system. Managers in the system are of different kinds according to the work they will supervise and they will send a request to the top-level manager for addition of a new employee.

Benefit	9
Detriment	7
Cost	8
Risk	3

Stimulus	The manager sends a request to the HR manager and views employee information.
Response	A new employee is being added.

## Requirements:

4.1.1.1.The system shall allow the HR manager to request the top-level manager for addition of a new employee.

4.1.1.2.The top-level manager approves the request.

4.1.1.3.The manager (responsible for adding new employees) looks after the employee's information.

## 4.1.2.Update an Employee Information:

The manager has the ability to add a new employee. Similarly, he can also update an employee's information such as credentials. This is a much-needed feature of the DSS system to keep a record of employees.

Benefit	7
Detriment	5
Cost	7
Risk	4

Stimulus	The manager in order to keep a track of employees updates their information if required.
Response	The information of an employee is being updated.

Requirements:

4.1.2.1.The employees can claim to update their information.

4.1.2.2.The manager receives the request for an update and does the rest of the work.

#### 4.1.3. Monitor Employee Activity on the System:

One of the most important things after adding an employee is to control his activity on the system. This feature helps the managers to view their activity.

Benefit	8
Detriment	7
Cost	9
Risk	2

Stimulus	The manager in the DSS system is able to view the activity of employees once they're added.
Response	The complete information about employee's activity will be shown to the manager.

Requirements:

4.1.3.1.The system shall allow the manager to monitor employee activity on the system.

4.1.3.2.The manager may use an activity tracking system.

4.1.3.3.The manager may personally observe the employee's activity.

#### 4.1.4.Departmentalization of employees:

The manager can form employees into departments. This can help both the employees and the manager to make the organization better. The DSS system will help this out by providing the managers an option to departmentalize.

Benefit	7
Detriment	7
Cost	6
Risk	4

Stimulus	The manager in DSS system can form different departments among employees to make sure the work done by each of them efficiently.
Response	The departments will be formed and employees will be given specific departments.

## Requirements:

4.1.4.1.The system shall allow the managers to departmentalize the employees.

4.1.4.2.The system shall observe the employees in different areas to allot them different departments.

## 4.1.5.Delete an existing employee:

Benefit	9
Detriment	6
Cost	5
Risk	4

Stimulus	The manager in DSS System can check an employee's existing status to delete him.
Response	The employee will be deleted and the record will be checked.

## Requirements:

**4.1.5.1.** The system shall allow the manager to delete an existing employee.

**4.1.5.2.** The system shall allow the manager to check the record of employees.

**4.1.6.** Management of Payroll Ledger:

The manager will be able to process payrolls of employees. He will keep a record of the employees to generate their pays and maintain them. The managers will be able to maintain this ledger after conducting activities related to employees pays.

Benefit	6
Detriment	5
Cost	5
Risk	6

Stimulus	The manager in DSS system can manage the employees' payrolls once their active status is in record
Response	Payrolls will be generated and will be maintained.

## Requirements:

**4.1.6.1.** The system shall allow the manager to process the payroll of employees.

**4.1.6.2.** The system shall allow the manager to keep a track of employees.

4.1.6.3. The system shall allow the managers to undergo payroll alliance

4.1.6.4. The system shall allow the managers to offer Direct Bank Disbursement to the employees.

4.1.6.5. The system shall allow the managers to perform the activity of Pay-slip generation.

#### 4.1.7. Compensation Administration:

It is very important to keep a healthy environment in any organization which is beneficial to both the managers and the employees. Hence, this feature allows the establishment of a compensation administration.

Benefit	8
Detriment	8
Cost	9
Risk	5

#### Stimulus:

The manager in DSS system can help form a compensation administration by keeping in view the need of the hour.

#### Response:

A beneficial administration will be formed.

#### Requirements:

4.1.7.1. The system shall allow the manager to establish a compensation administration.

4.1.7.2. The system shall allow the manager to offer bonuses and compensation administration.

4.1.7.3. The system shall allow the manager to make Employee Benefits Administration.

4.1.7.4. The system shall allow the manager to provide complete data security to the employees.

4.1.7.5. The system shall allow the manager to perform Error-free calculations in order to ensure benefits of employees.

#### 4.1.8. Employee Performance evaluation:

The managers, in order to manage payrolls, will evaluate the performances of employees and based on them the bonuses and other benefits will be awarded.

Benefit	10
Detriment	5
Cost	8
Risk	3

Stimulus:

The manager in DSS system can evaluate performance of employees in order to award them with bonuses.

Response:

The evaluation will be done and the manager can view the performance.

Requirements:

4.1.8.1.The system shall allow the manager to evaluate the performance of employees.

4.1.8.2.The system shall allow the manager to form and manage the Annual Report for all & individual Employees.

4.1.8.3.The system shall allow the manager to keep a track of Employee Earnings.

4.1.8.4. The system shall allow the manager to devise policies and address them to the employees.

4.1.9. Time & Attendance Management:

The managers 'shall' always keep a track of the employees' attendance and sick leaves in order to maintain and check their payroll ledger and their performance.

Benefit	8
Detriment	7
Cost	9
Risk	1



Stimulus:

The manager in DSS system is able to keep a check on time and attendance of employees to check the punctuality.

Response:

A complete track will be kept showing the time and attendance.

Requirements:

**4.1.9.1.**The system shall allow the manager the time and attendance of employees.

**4.1.9.2.** The system shall allow the manager to introduce Biometric Time and Attendance.

**4.1.9.3.** The system shall allow the managers to manage the employees' absence and leaves.

**4.1.9.4.** The system shall allow the manager to track the sick leaves of employees.

**4.1.10. Mobility and tracking:**

The managers can transform the mobile workforce as it becomes important when working in sites or fields.

Benefit	10
Detriment	6
Cost	9
Risk	5

Stimulus:

The manager in DSS system can form a mobile workforce for activities related to sites and fields.

Response:

Mobility will be formed and then tracking can be done.

Requirements:

**4.1.10.1.**The system shall allow the managers to enable mobility and manage the mobile workforce.

**4.1.11. Employee Tracking through GPS and Image Capture:**

It is very important to track the employees and this can be done by using tracking through GPS and image capture.

Benefit	8
Detriment	6
Cost	9
Risk	4

Stimulus:

The manager in DSS system can track the employees through GPS to track them when on fields or faraway.

Response:

The tracking will be done and a check can be maintained.

Requirements:

4.1.11.1.The system shall allow the manager to track employees via image capture and GPS.

4.1.11.2. The system shall allow the manager to Turn Off Employee Tracking through GPS and Image Capture (for a particular employee).

4.1.11.3.The system shall allow the manager to Turn Off Employee Tracking through GPS and Image Capture (for a particular department).

4.1.11.4. The system shall allow the manager to Turn Of Employee Tracking through GPS and Image Capture (for all employees).

#### 4.2. Employee Features:

In a HR+payroll management system, it is very important to consider the employees as most of the functionalities are done by them and so it would be an inconsistent approach not mentioning them.

Priority: High

##### 4.2.1 Start System:

The employees in the system will have this option to login and start the system.

<i>Benefit</i>	9
<i>Detriment</i>	6
<i>Cost</i>	8
<i>Risk</i>	1

Stimulus:

The employee in the DSS system in order to enter the system can login and start it.

Response:

The employee will be logged in and start the system.

Requirements:

4.2.1.1 The system shall allow the employees to start the system.

4.2.1.2 The system shall allow the employee to enter credentials.

4.2.1.2.1 The system shall allow the employee to enter his email.

4.2.1.2.2 The system shall allow the employee to enter his username.

4.2.1.2.3 The system shall allow the employee to enter his password.

4.1.2.2 The system shall allow the user to login the system.

4.2.2 logout the System.

<i>Benefit</i>	19
<i>Detriment</i>	9
<i>Cost</i>	6
<i>Risk</i>	5

Stimulus:

The employee in the system is able to logout and shut the system.

Response:

The system will shut down.

#### 4.2.3 View the system's status and manage the session.

<i>Benefit</i>	5
<i>Detriment</i>	8
<i>Cost</i>	9
<i>Risk</i>	6

Stimulus:

The employee in the DSS system can keep a view on system's status to manage the session.

Response:

The system's status can be viewed and session can be managed.

#### 4.2.4 Employee Self-Service:

The employees are able to access the HR related information.

<i>Benefit</i>	8
<i>Detriment</i>	6
<i>Cost</i>	9
<i>Risk</i>	5

Stimulus:

The employees can undergo self-service to access the HR related information.

Response:

A self service will be formed.

Requirements:

4.2.4.1 The system shall allow the employee to do self-service.

4.2.4.2 The system shall allow the employee to efficiently make use of a short learning curve.

4.2.5 Surveys & Feedback:

The feedback of employees is a much required thing in a payroll and HR management system as it helps to give a boost to employee's confidence and this feature in our system helps the employees in this regard.

<i>Benefit</i>	<i>4</i>
<i>Detriment</i>	<i>6</i>
<i>Cost</i>	<i>9</i>
<i>Risk</i>	<i>6</i>

Stimulus:

The employees in the DSS system can provide feedback regarding their position and their treatment.

Response:

Surveys and feedbacks can be submitted.

Requirements:

4.2.5.1 The system shall allow the employees to provide feedback.

4.2.5.2 The system shall allow the employees to send emails.

4.2.5.3 The system shall allow the employees to make emergency notifications and alerts.

4.2.5.3 The system shall allow the employees to make emergency notifications and alerts

#### 5.Functional Requirements:

In this section, we will explain the major functions of DSS along with the data flow. So, the major functionality of the project such as authentication mechanism, personal data processing, recruitment, and graphical user interface unit will be explained step by step.

##### Authentication

Login	User can login to the DSS system with his/her username and password.
Logout	User can logout from the DSS system.
Failed Login Attempt	If the user does not exist in the database or the user did not get his role authorized by the admin yet.

##### Authorization

User Role Check	After logging in, the user role will be checked from the database and the user interface will be created according to that role/roles.
-----------------	--

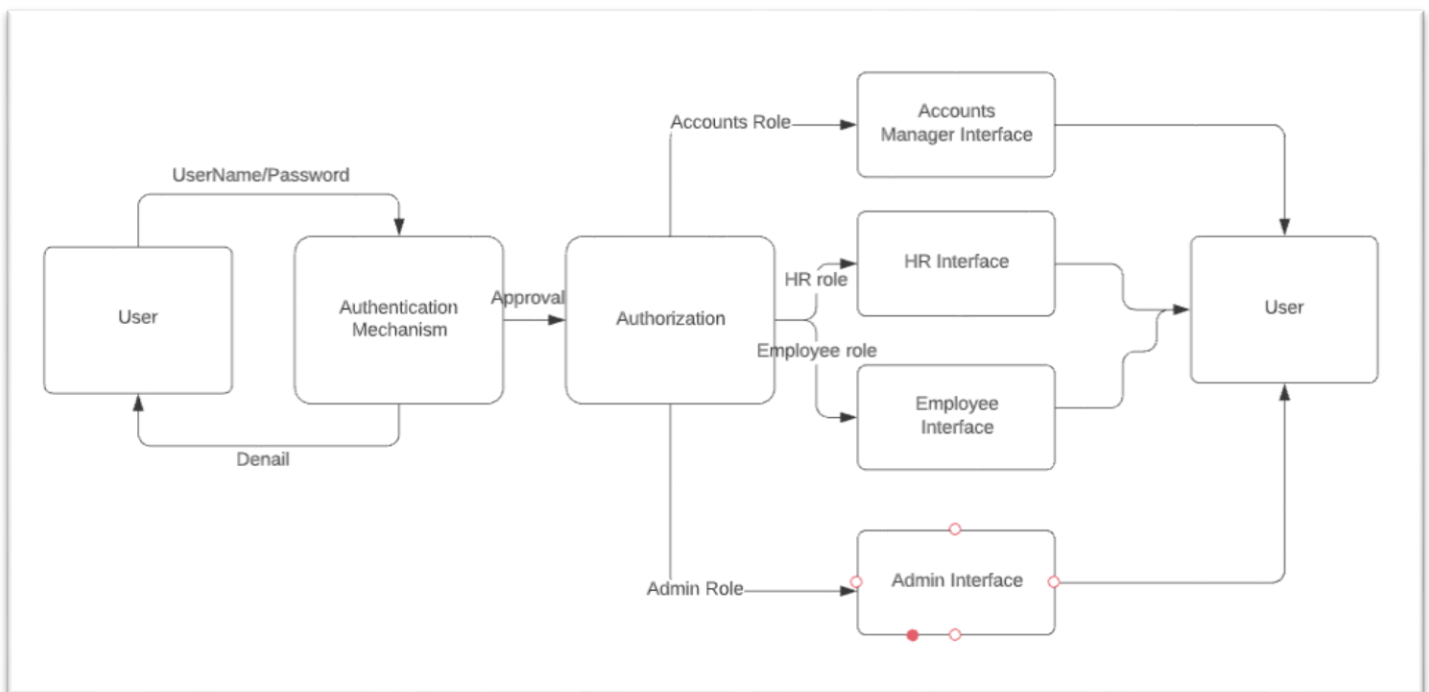


Figure 5.2: Authorization / Authentication Mechanism DFD

## Data processing

Display	User with defined roles can display the content of the database. Being more specific, employee can only view his/her personal information. Manager can see not only his/her personal information but also employees' information who are working under his/her coverage. Admin and HR can display their personal information and all employees' information
Edit	A user with employee role can edit his/her specific personal information. Manager can only edit employees' personal information that is under his/her coverage except user role type. HR can edit all employees' information except user role type. Admin can edit all information related to all employees' including their user role type.

Search	User with manager role type can search the content of database for the employees who are under his/her coverage. HR and admin roles can search all the employees' information in the database. Search feature works on specific keywords showing employees' characteristics, peculiarities, skills, features, and etc. For example, HR wants to find employees who are well trained in "Mongo DB". He/she will write the specific keyword in the search bar and press the available search button. Afterwards, he/she will find a list of all the employees' who know "Mongo DB"
Update Authentication	This feature can be used only by admin role type. Admin can update the role type of a specific user. For example, an employee got promotion and his role type will be changed from employee role to manager role. Admin will be able to update this authentication mechanism.

### 5.1. Adding a User

Adding an Employee	HR role type is able to add a new employee to the database. The new employee will have all the required personal information related to his/her. The new created employee will have an id.
Add a new user	After being created a new employee by HR role, admin role is responsible for creating a new user by the specified id assigned in the "Add a new employee" feature. The unique id will be given by the system. Admin will assign a new role such as employee, manager, HR, and admin to the new created user.



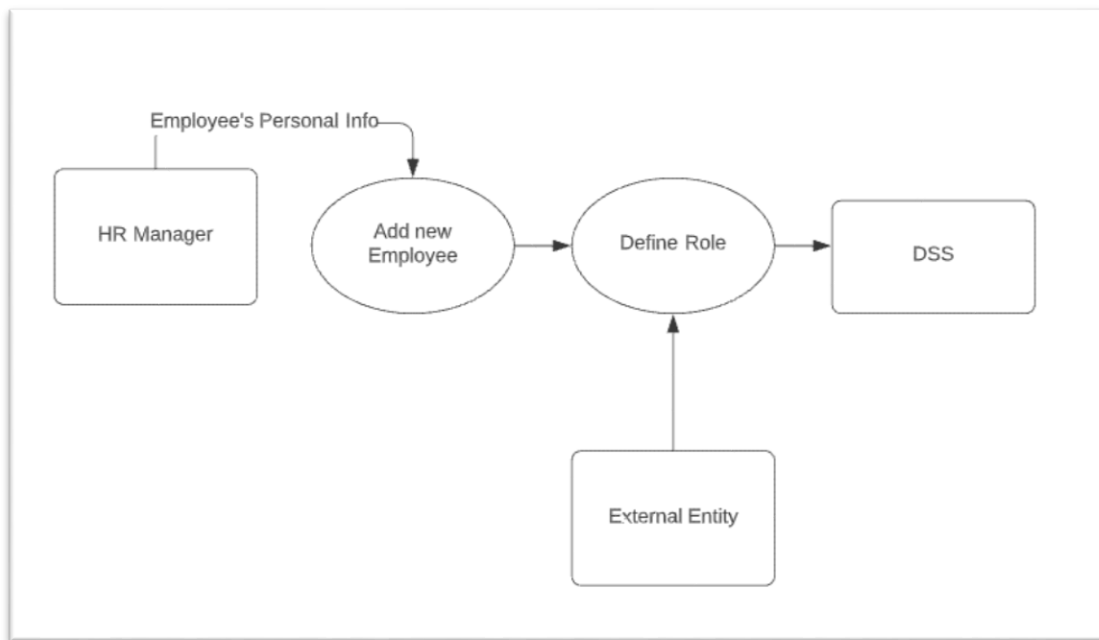


Figure 5.4: DFD of Recruitment

## 6. Other Nonfunctional Requirements

### 6.1. Performance Requirements

- 6.1.1. The system must respond within 3 seconds when the user starts the system.
- 6.1.2. The system must generate pay slips in 10 secs on the user's current terminal after the request is sent from the user.
- 6.1.3. The system must compile all the payroll details within 15 seconds after the user enters the data and display it on the user's current terminal as a PDF file.
- 6.1.4. The system must delete the employee in exactly 3 seconds from the system after the command of admin from administrator's panel.
- 6.1.5. The system must update the record of the employee in a maximum of 15 seconds.
- 6.1.6. The system must shut down after the user's command in 10 seconds after saving all the changes/data.
- 6.1.7. The system must process the payroll slips of the employee (from employee database) using given data in 5 to 10 seconds.
- 6.1.8. The application must update the interface on interaction within 2 seconds

## **6.2.Safety Requirements**

- 6.2.1.**The system shall transfer the data without any changes.
- 6.2.2.**The system shall notify about the critical situations within 1 second.
- 6.2.3.**The system shall store data without any loss of information.
- 6.2.4.**The database shall be backed up hourly to prevent loss of the data, in case the system crashes or any other error occurs.
- 6.2.5.**The system shall perform all the calculations and then verify them to prevent any calculation error.

## **6.3.Security Requirements**

- 6.3.1.**The employee's pay information 'shall' be accessed only to authorized operators.
- 6.3.2.**The system shall verify the id and password of the operator before giving access.
- 6.3.3.**Employee information shall be private for outside servers.
- 6.3.4.**The system 'shall' log out as soon as inactivity time increases.
- 6.3.5.**Transaction details of the employee shall not be visible.
- 6.3.6.**The system shall only track user GPS within office hours not after that.
- 6.3.7.**Once an employee is deleted from the system, all confidential information shall also be deleted.

## **6.4.Software Quality Attributes**

### **6.4.1.Availability:**

- 6.4.1.1.**As the system is used by HR and Employee, it is designed in a way that it 'shall' be available the whole day.
- 6.4.1.2.**If any error occur or system crashes then it must

### **6.4.2.Accuracy:**

- 6.4.2.1.**Payroll checks and reports must be mathematically correct, including calculations involving rupees.

### **6.4.3.Flexibility:**

**6.4.3.1.**The system shall be able to accommodate changes and update when rules or regulations change. E.g. tax withholding may change after a year so the system shall be able to update these changes.

**6.4.4.**Reusability and portability:

**6.4.4.1.**The system shall be portable and reusable as it is made using object oriented programming language so it is easy to make evolution and maintain.

**6.4.5.**Usability:

**6.4.5.1.**This application is a mobile application designed for Android and IOS users. Users have to know how to use mobile devices and how to read and write messages. Thus, our application is easy to use and understandable so that no time is required for users to become efficient at the usage of DSS.

**6.4.6.**Reliability:

**6.4.6.1.**Even in the case that a lot many users are using the application the failure of the application shall be less than other operators and applications.

**6.4.7.**Supportability:

**6.4.7.1.**The programming language used to build this system is object-oriented so that the concerns/modules of business logic are separated from each other and therefore easy to maintain.

**6.4.7.2.**The codes must be easy to understand and readable.

**6.4.7.3.**All design architecture 'shall' be well documented.

**6.5.**Business Rules

**6.5.1.**When user press the attendance button (time out) the system must generate the daily report of the Employee and store in database.

**6.5.2.**All user must have unique and valid id

**6.5.3.**All user must have valid password

**6.5.4.**All employees must have a bank account and their bank account number must be valid.

## 7.Weiger Prioritization Matrix

	A	B	C	D	E	F	G	H	I	J
1	Relative weight	0.25	0.25			0.25		0.25		
2	Requirement	Relative benefit	Relative detriment	Total	Value%	Relative Cost	%Cost	Relative Risk	Risk%	Rank
3	4.1.1	9	7	4	6.694561	8	6.4	3	4.6875	2.41517
4	4.1.2	7	5	3	5.020921	7	5.6	4	6.25	1.69482
5	4.1.3	8	7	3.75	6.276151	9	7.2	2	3.125	2.43143
6	4.1.4	7	7	3.5	5.857741	6	4.8	4	6.25	2.12044
7	4.1.5	9	6	3.75	6.276151	5	4	4	6.25	2.4492
8	4.1.6	6	5	2.75	4.60251	5	4	6	9.375	1.37645
9	4.1.7	8	8	4	6.694561	9	7.2	5	7.8125	1.7837
10	4.1.8	10	5	3.75	6.276151	8	6.4	3	4.6875	2.26422
11	4.1.9	8	7	3.75	6.276151	9	7.2	1	1.5625	2.86500
12	4.1.10	10	6	4	6.694561	9	7.2	5	7.8125	1.7837
13	4.1.11	8	6	3.5	5.857741	9	7.2	4	6.25	1.74207
14	4.2.1	9	6	3.75	6.276151	8	6.4	1	1.5625	3.15285
15	4.2.2	19	9	7	11.71548	6	4.8	5	7.8125	3.71551
16	4.2.3	5	8	3.25	5.439331	9	7.2	6	9.375	1.31265
17	4.2.4	8	6	3.5	5.857741	9	7.2	5	7.8125	1.56076
18	4.2.5	4	6	2.5	4.1841	9	7.2	6	9.375	1.00973
19		135	104	59.75	100	125	100	64	100	

## NASA ARM TOOL

The counts of IMPERATIVE components found in the directory file DSS.txt are shown in the Table below.

IMPERATIVE  
-----  
ARE APPLICABLE  
ARE TO  
IS REQUIRED TO  
MUST  
RESPONSIBLE FOR  
SHALL  
SHOULD  
WILL

OCCURRENCE

-----  
0  
0  
0  
22  
3  
106  
2  
51

TOTAL 184

The counts of CONTINUANCE components found in the directory file DSS.txt are shown in the Table below.

CONTINUANCE	OCCURRENCE
-----	-----
:	112
AND	171
AS FOLLOWS:	0
BELOW:	0
FOLLOWING:	0
IN PARTICULAR:	0
LISTED:	0
SUPPORT:	0
	-----
TOTAL	283

The counts of DIRECTIVE components found in the directory file DSS.txt are shown in the Table below.

DIRECTIVE	OCCURRENCE
-----	-----
E.G.	3
FIGURE	7
FOR EXAMPLE	2
I.E.	3
NOTE:	0
TABLE	1
	-----
TOTAL	16

The counts of OPTION components found in the directory file DSS.txt are shown in the Table below.

OPTION	OCCURRENCE
-----	-----
CAN	43
MAY	6
OPTIONALLY	0
	-----
TOTAL	49

The counts of WEAK PHRASE components found in the directory file DSS.txt are shown in the Table below.

WEAK PHRASE	OCCURRENCE
-----	-----
ADEQUATE	0
AS APPROPRIATE	0
AS REQUIRED	0
BE ABLE TO	11
BE CAPABLE OF	0
CAPABILITY OF	0
CAPABILITY TO	0
EASY TO	5
EFFECTIVE	0
NORMAL	0
PROVIDE FOR	0
TIMELY	0
	-----
TOTAL	16

## **Glossary**

DSS: Digion Smart Solutions

SRS: Software Requirement Specification Document

HR: Human Resource

HRM: Human Resource management