**CHAPTER 3**

**TECHNICAL BACKGROUD**

This chapter presents the overview of the general processes of the Human Resource Management System (HRMS) which are shown in the IPO (Input, Process, and Output). In this chapter, the proponents also named the applications and software that they used in the development of the system.

The researchers used SQL Server Management Studio 19 (SSMS19) as the primary database management tool due to its robust support for handling structured data efficiently. SSMS 19 provided advanced functionalities for creating, modifying, and managing the database architecture of the Human Resource Management System (HRMS). It will allow the researchers to implement secure and optimized queries, design relational schemas, and maintain data integrity.

The Researchers also used **C#** as the back-end programming language to handle the system's logic, processes, and database interactions. the researchers were able to implement functionalities such as user authentication, CRUD (Create, Read, Update, Delete) operations, and logic that responds to user actions on the front end. And **React Vite (Typescript)** is going to be used to create a dynamic, responsive, and user-friendly interface. With its component-based architecture, React is going to make it easier for the researchers to build modular features such as real-time data displays, interactive forms, and intuitive dashboards.

The chart model reduced the uncertainty in the development of the proposed system which is illustrated in Figure 1.

**FIGURE 1 IPO Diagram**

**Process**

**Input**

**Process**

Logging In of the Admin/SuperAdmin with their username and passwords

Access for Dashboard to view contract end date and calendar

Admin will create of a account for employee in user management

**Output**

Access Profile to view personal information and edit the record of employee

The admin will input the score of employee on performance evaluation

Log out

**Input**

Employee will input their personal information and records

Access for Dashboard to view contract monitoring

Logging In of the Employee with their username and passwords or Employee Number

Log Out

Access Profile to view personal information and Performance Records

Logging in with username and password is the first thing to do. so, the user will be able to enter as Employee, Admin or Super Admin. In the Logging In point, if the system recognizes the entered username and password, it will automatically direct its way to the system’s process in connection to the dashboard. The admin will create an account for the employee in User Management, which is linked to the database, will be able to accumulate the information of employee. When all the processes of the employee information are done, the information will proceed to the Admin side for them to review.