



DATABASE INFORMATION GUIDE

The AltHealth Database System

Introduction

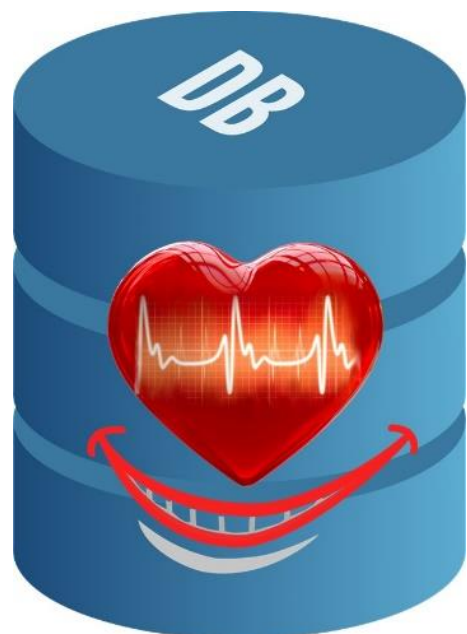
The AltHealth Database System is a database driven system specifically designed for the business called AltHealth who provides a range of services to the community, including alternative health care solutions such as consultations with a health care provider and the sale of a wide range of supplements. This system was designed and implemented by Johann Smith, a student from the University of South Africa (with student number 5705-033-3).

This system is replacing a current traditional manual filing system which effectively digitalise all records of the business. This ultimately caused that a digital database would be implemented which the digital system would be based upon.

The solution is to create a relational database which stores the original data (as provided by the business) that has been processed, normalised and converted to be stored in the database. MySQL has been chosen as the relational database management system (DBMS) for the solution. The reasons for selecting the MySQL DBMS is that it is the world's most popular open source database, enabling cost-effective delivery of reliable, high-performance and scalable web-based applications.

This document provides details into the flow of data in The AltHealth Database System, the relations the database consists of and the relationship between entities (as displayed in an Entity-Relationship Diagram).

It is important to note that The AltHealth Database System is part of a two-phase development for the entire digitalised system for AltHealth. The AltHealth Database System covers Phase 2, which is the bookings and client recording system. The system also provides management of supplements and suppliers, updating invoices and compiling Management Information System reports for the owner in order to take structured and informed decisions for the future.



Flow of Data in the System

The traditional filing system used a specific procedure to conduct administration within the business. This includes on how supplements are ordered and the process an appointment follows.

The following Data Flow Diagram (DFD) in Figure 1 illustrates the process of the supplements ordering system before the new system is implemented. Figure 2 illustrates Diagram 0, which illustrates the flow of data within the traditional system when supplements are sold to clients.

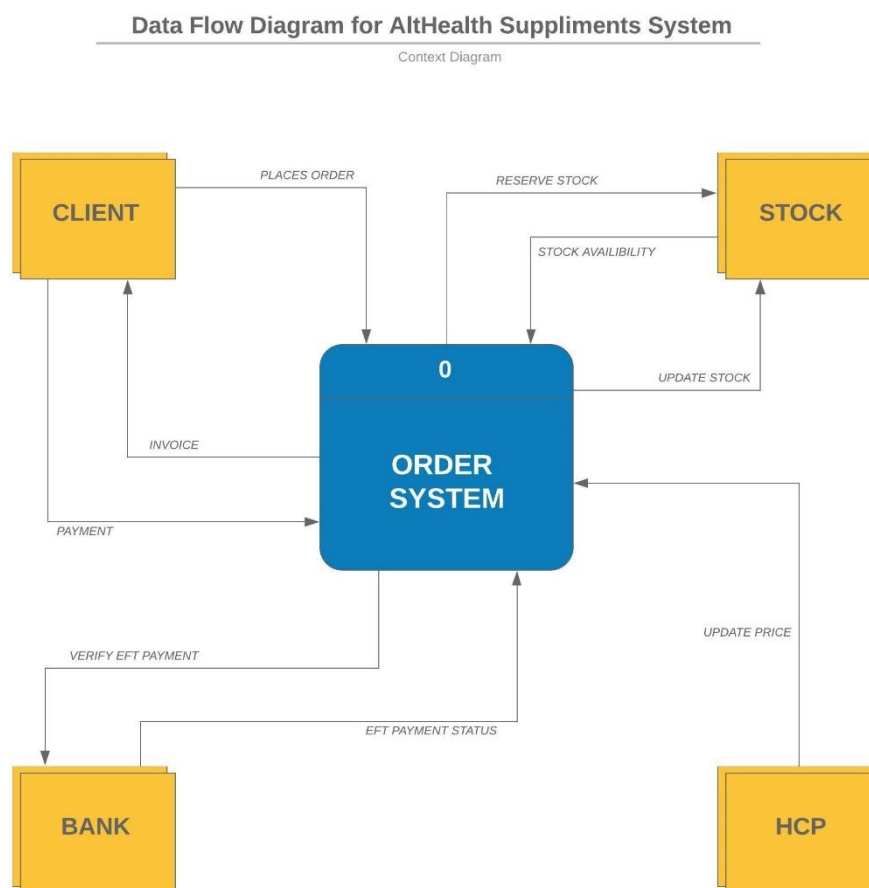


Figure 1: DFD Context Diagram – The Ordering System

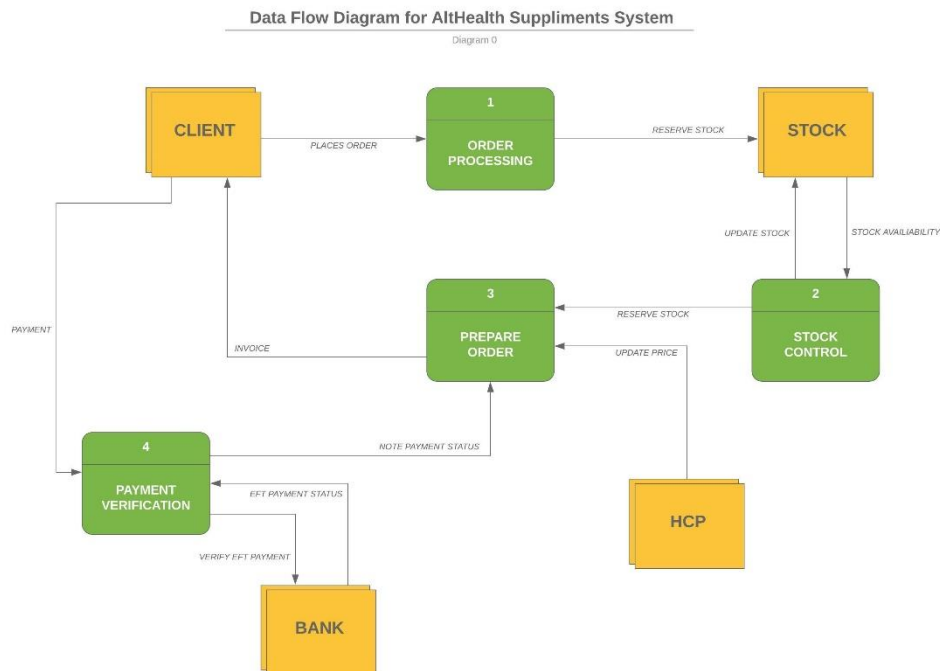


Figure 2: DFD Diagram 0 – The Ordering System

As The AltHealth Database System focussed on the development on recording a client, making and conducting appointments, as well as managing supplements and suppliers, focus has been placed on the traditional appointments system. The appointments system has been examined and the process of the appointment system at AltHealth is illustrated in the DFD's in Figures 3 and 4.

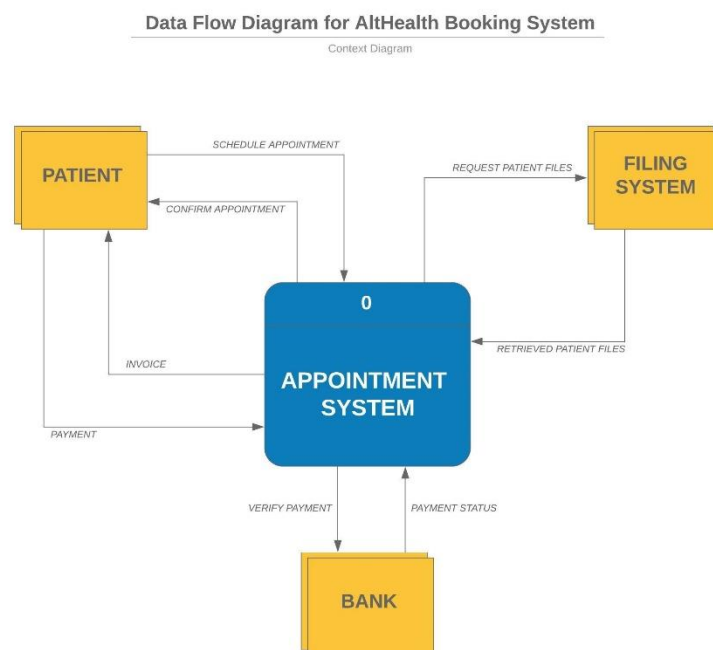


Figure 3: DFD Context Diagram – The Appointment System (Before new system implementation)

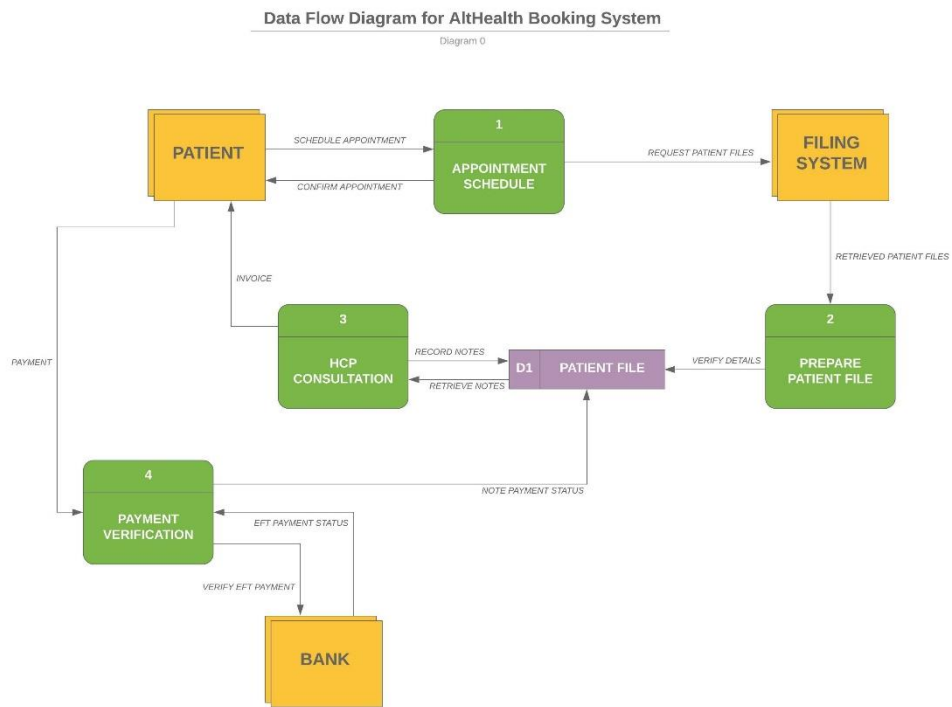


Figure 4: DFD Diagram 0 – The Appointment System (Before new system implementation)

The Database Solution

After carefully analysing the flow of the appointment system and the data provided by the business, an effective database solution was created with MySQL.

The database, named “althealth” in the MySQL database, consists of 11 tables. Two tables are not part of the relationship of the system as the table ‘tblUsers’ is utilised for system users and their login credentials (such as username and passwords) in order to access the system and to prevent any unauthorised user from accessing parts of the system which may be in breach of the business’ information policy, and ‘tblTimes’ is used to determine booking slots for the booking system.

A screenshot of the structure of the database is shown below in Figure 5.

The Entity-Relationship Diagram (as illustrated in Figure 6) illustrates the AltHealth Database, the relations and the relationships in between the relations. Each relation’s fields are also described in the diagram.

During the development of the new system (i.e. bookings and invoice), the flow of data has been improved and is more effective than the previous traditional system which the new system is replacing. The updated DFD is reflected in Figure 7.

The screenshot shows the phpMyAdmin interface for the 'althealth' database. The left sidebar lists the database structure, including tables like 'tblbookingsinfo', 'tblclientdata', 'tblinvoiceconsultations', 'tblinvoiceinfo', 'tblinvoicesupplements', 'tblpatientnotes', 'tblreference', 'tblsupplements', 'tblsuppliers', 'tbltimes', and 'tblusers'. The main panel displays a table with columns: Table, Action, Rows, Type, Collation, Size, and Overhead. The table lists 11 tables and a summary row for all tables.

Table	Action	Rows	Type	Collation	Size	Overhead
tblbookingsinfo	Browse Structure Search Insert Empty Drop	788	InnoDB	utf8_general_ci	128 K	-
tblclientdata	Browse Structure Search Insert Empty Drop	459	InnoDB	latin1_swedish_ci	112 K	-
tblinvoiceconsultations	Browse Structure Search Insert Empty Drop	788	InnoDB	latin1_swedish_ci	96 K	-
tblinvoiceinfo	Browse Structure Search Insert Empty Drop	1,528	InnoDB	latin1_swedish_ci	192 K	-
tblinvoicesupplements	Browse Structure Search Insert Empty Drop	2,418	InnoDB	latin1_swedish_ci	256 K	-
tblpatientnotes	Browse Structure Search Insert Empty Drop	784	InnoDB	latin1_swedish_ci	160 K	-
tblreference	Browse Structure Search Insert Empty Drop	6	InnoDB	latin1_swedish_ci	16 K	-
tblsupplements	Browse Structure Search Insert Empty Drop	249	InnoDB	latin1_swedish_ci	64 K	-
tblsuppliers	Browse Structure Search Insert Empty Drop	9	InnoDB	latin1_swedish_ci	16 K	-
tbltimes	Browse Structure Search Insert Empty Drop	11	InnoDB	latin1_swedish_ci	16 K	-
tblusers	Browse Structure Search Insert Empty Drop	2	InnoDB	latin1_swedish_ci	16 K	-
11 tables	Sum	7,918	InnoDB	latin1_swedish_ci	1 M	0 B

Figure 5: The AltHealth Database Structure in the DBMS

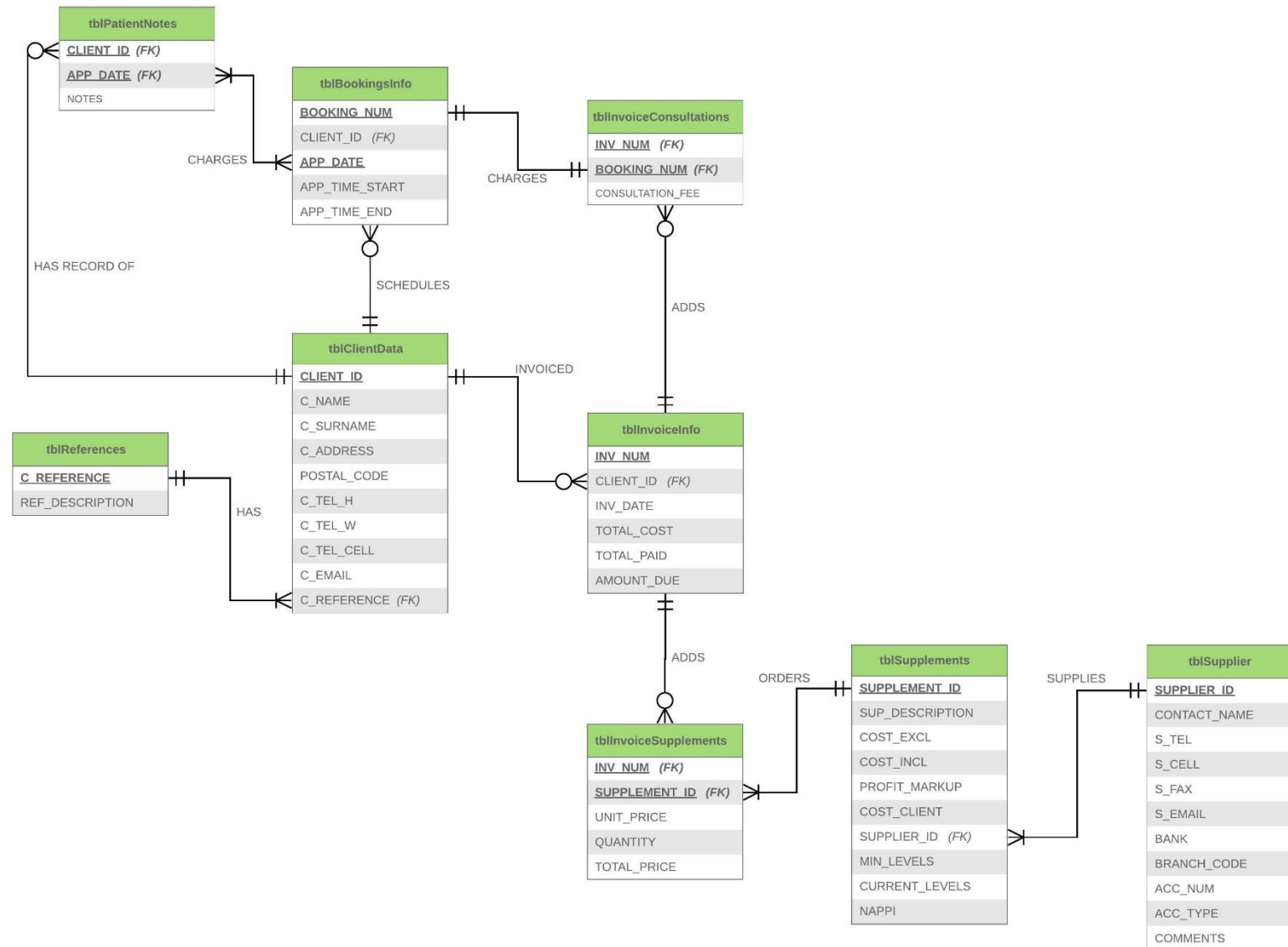


Figure 6: ERD for The AltHealth Database System

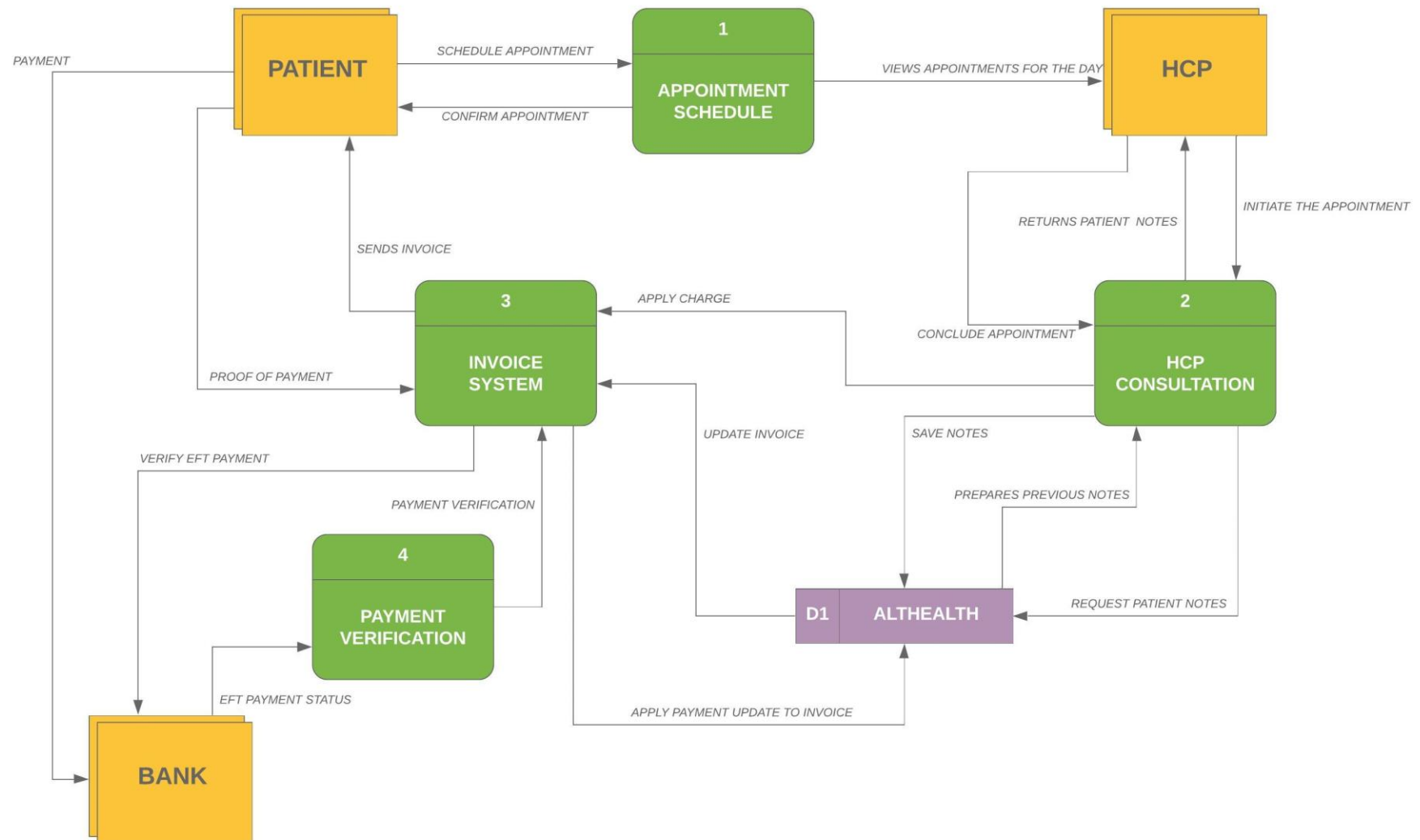


Figure 7: DFD Diagram 0 for The AltHealth Database System