Deliverable 5

IS 436 Structured System Analysis and Design
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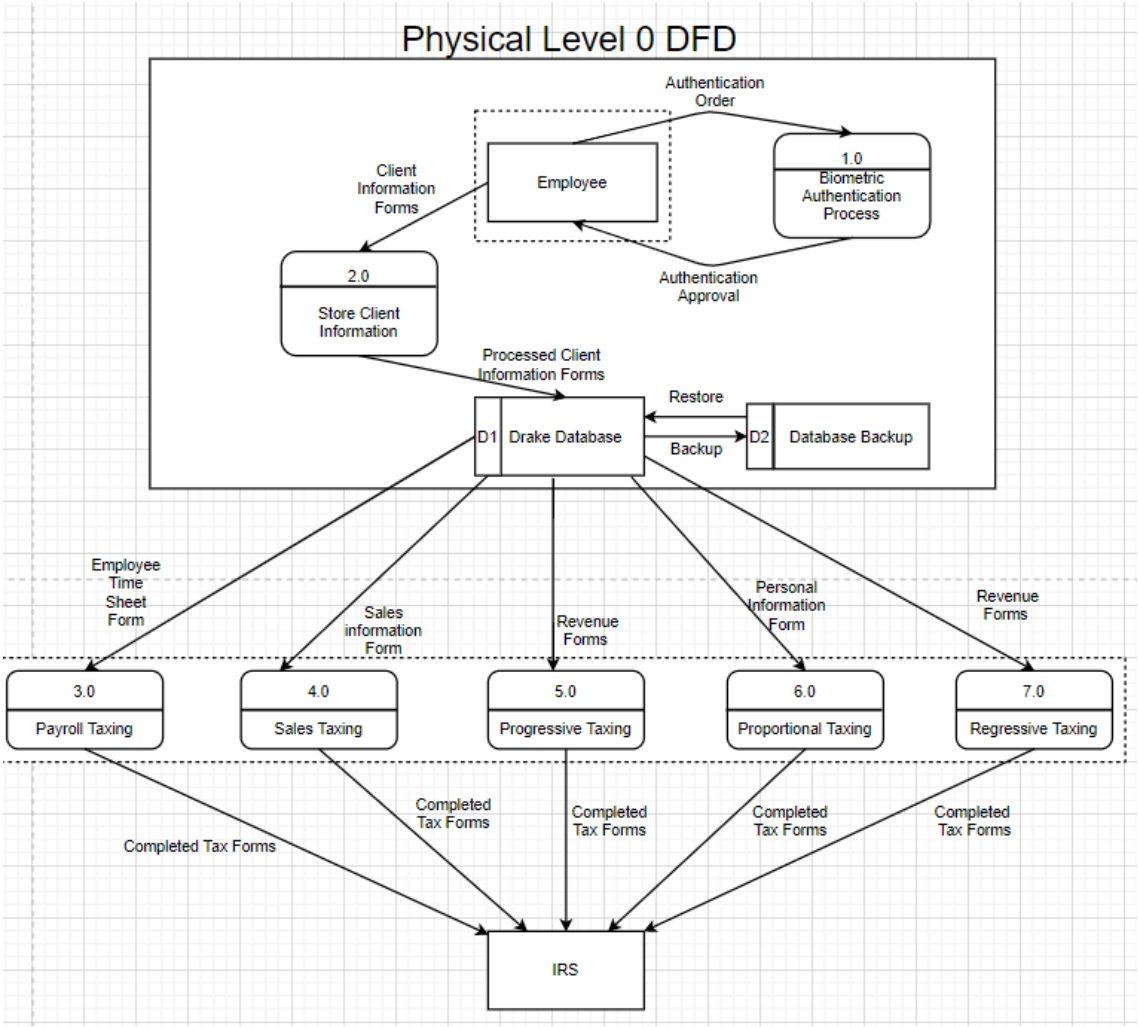
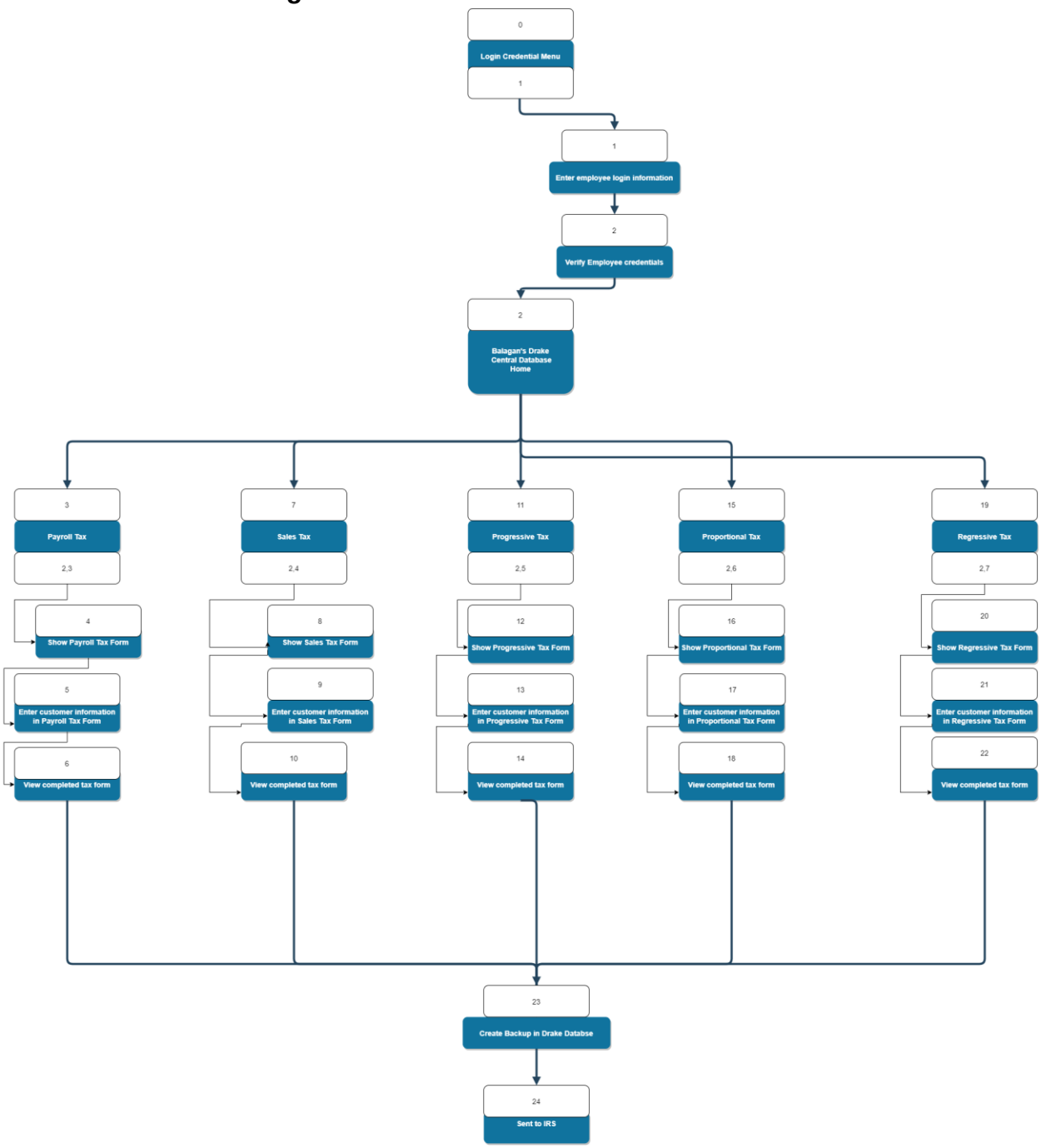
Physical Process Model:

The physical DFD is relatively similar to the logical DFD. Any action directly taken by an employee (and implied action between employee and client from outside of this system) qualify as human interaction points, with human intervention as an input source. The Tax processes are also human interaction points as even though the Drake Software is being used to process the tax info, it is not automated. As a point of output, the IRS does not intervene into the system, and as such can be considered automated in receiving output. The several types of tax forms allow for specialized data forms to be parsed each using more specific information relevant to the type of tax being filed, and as such for the sake of model complexity. The number and variety of forms that Balagan handles on a daily basis makes adding such details impractical to display from a single page, and will be seperated and accessed from a home page. A backup for the central database was also added, should the worst occur.



User Interface Design:

Interface Structure Diagram-



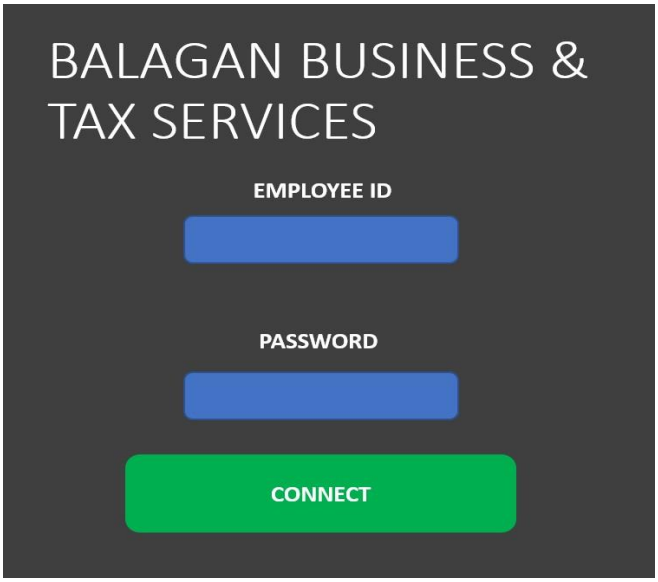
Interface Conventions and Standards-

As the solution to our problem addresses authentication, there is not much relevant to the accounting firm that could be converted to metaphor. As for objects and actions in regards to the authentication interface, non-employees will not have to interact with the authentication process that is necessary to access the data and services of the network. As such, on the non-employee front, there is little to no interaction at all with an interface. On the other hand, there will be considerable interface interaction with employees to access the more sensitive information.

Employees will be required to interact with a relatively small amount of interface objects and actions for the authentication system. To begin with, they are referred to as employees, being employed by the firm. A password will still be requested, and employees should still be familiar with the concept moving to the additional layer of authentication when the biometrics is implemented. Ideally, moving forward with the biometrics solution, the biometrics should have an interface with iconography depicting a fingerprint to make it visually clear what is necessary to proceed in connecting to the system's network. There will also be very clear approved and denied access iconography, in a thumbs up and thumbs down respectively. The action of fingerprint biometrics would also likely have a prompt when a request to connect to the system network has been made.

Visualized below are some example templates of the display that appears when connected to a company router, the interface of the biometric fingerprint scanner, and the home screen of the database after a successful authentication and connection to the network.

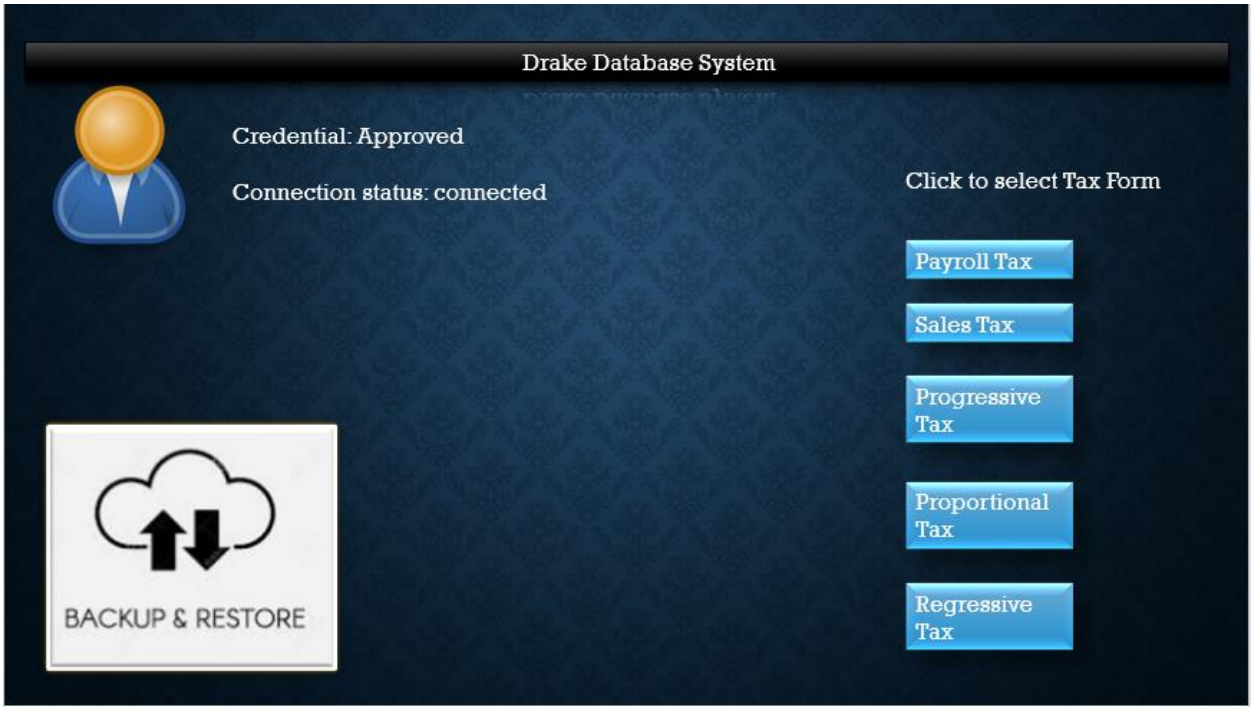
1. Connecting to the network-



2. Fingerprint Authentication-

FINGERPRINT AUTHENTICATION

3. Database Home Menu


Drake Database System
Credential: Approved
Connection status: connected
Click to select Tax Form
Payroll Tax
Sales Tax
Progressive Tax
Proportional Tax
Regressive Tax
BACKUP & RESTORE