Title page

- Clothing Store Point of Sale System
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System Description

- Brief overview of system

Software Architecture Overview

- Architectural diagram of all major components
- UML Class Diagram
- Description of classes
- Description of attributes
- Description of operations

* descriptions should be detailed and specify datatypes, function interfaces, parameters, etc..

Development plan and timeline

- Partitioning of tasks
- Team member responsibilities

https://app.diagrams.net/

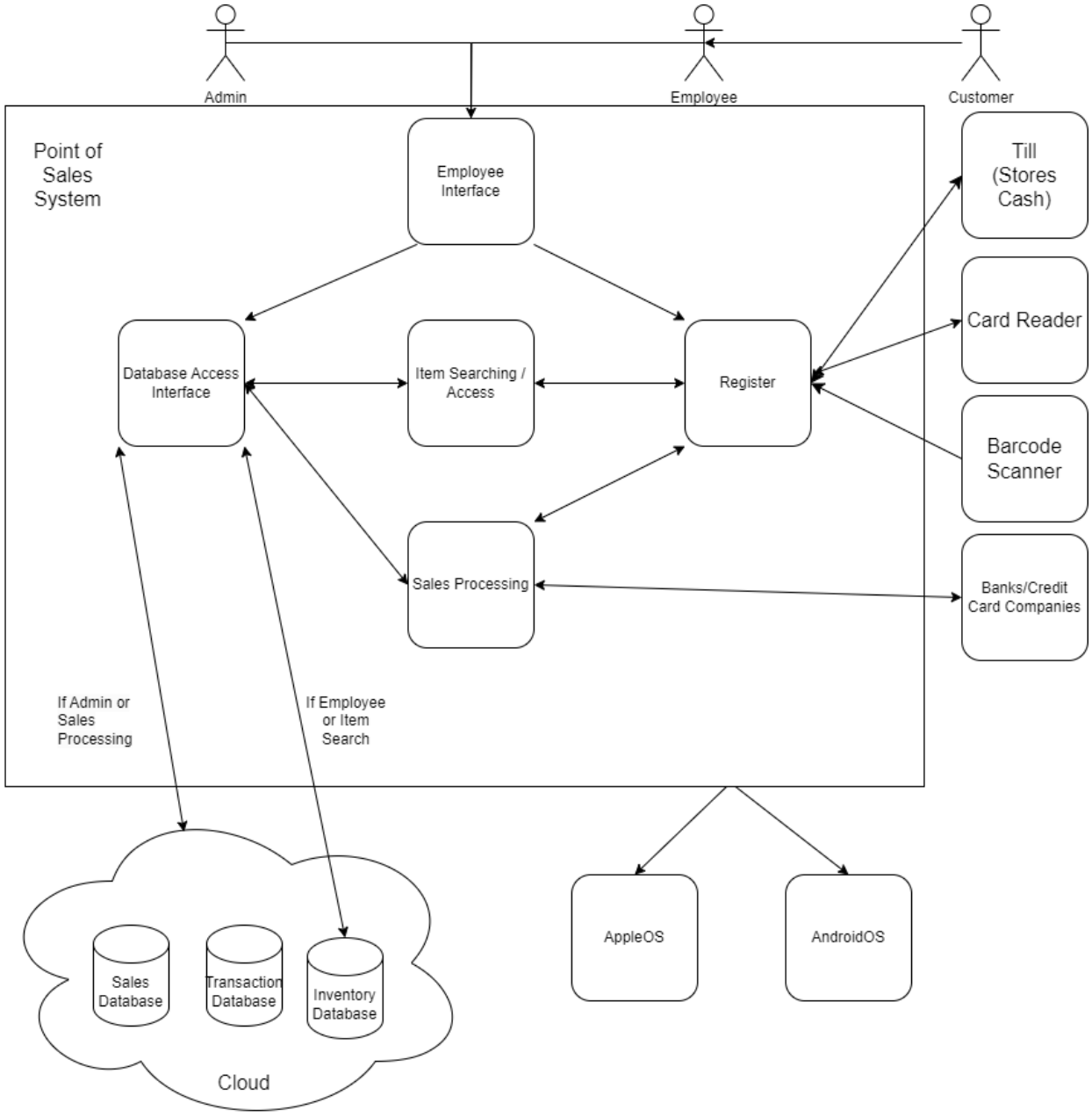
UML Diagram:
https://drive.google.com/file/d/1HqSmR09GcnA6GSaa6Ls4oeGJw2rHH6cz/view?usp=sharing

Architectural diagram:
https://drive.google.com/file/d/1qmHMEAf6O0wI9R76_m9gX6Ird6wuPaCl/view?usp=sharing

Architectural Diagram Explanation:
Brief Overview:

The Clothing Store Point of Sale System is a system designed to manage and keep track of clothing store transactions, including purchases and returns. This system should keep track of and continuously update an inventory database, which should be searchable by employees. Employees should be able to use the system to check out items, and the system

should accept payment via credit card, debit card, or cash. Item identification should be possible via a barcode scan or a manual ID entry, thus, devices with built in cameras like Android or Apple machines should be supported by the system. Additionally, transaction history should be stored in a database separate from the inventory, and this data should be secure and accessible only to administrative users.



Customers will interact with employees for anything to do with this system.

Employee Interface:

- Both employees and administrators will access the system via the Employee Interface terminal. They will login to the system with their credentials that indicates if they have administrator privileges or not.
- From there, any user can pick between the Database access interface or the regular register interface
- Both Administrators and Employees can do the same tasks, but when it comes to database access, Administrators have more permissions in viewing different databases.

Database access interface:

- Employees will only have access to the inventory database.
- Administrators will be able to access all three databases. The new databases they will be able to access include the Sales Database and the Transactions Database.
- System will also use this interface to access the database
    - Item Search will only be able to peak at objects in inventory database
    - Sales processing can view and/or change values in all databases in cloud

Cloud:

- The cloud will contain the databases needed for this system. These databases include
    - Inventory
        - People who have access can view or edit values pertaining to specific items a store has. Values include item IDs, color, size, and inventory amount.
    - Sales
        - People who have access can view the history of sales, and see trends of what has been sold and profits of the store(s).
    - Transactions
        - People who have access can view the history of transactions including payment history and sensitive information pertaining to customers.

Register:

- The register is connected to the till (box that keeps the cash), a card reader, and a barcode scanner.
- Through the register, a user can access item searching/access as well as sales processing
    - Takes manual code or barcode scan and sends information to item searching/access to fetch item information.
    - Takes items in checkout and calculates totals and tax. Information is then sent to the sales processing function.

Item Search/Access

- Looks up items and returns information about an item through the Database Access Interface. Items can be imputed manually through the register, or takes the barcode from the scanner and translates it into the associated ID. After an item is found in the database, item information is sent back to register.

Sales Processing

- Takes information from register to update databases through Database Access Interface
    - Updates inventory amounts

        - Updates sales for items sold
        - Updates transactions for the specific transaction that just took place
    - Connects with bank if credit/debit card is used
    - Tells the register how much cash is owed or given back depending on what values it receives from the register.

Different Operating Systems

- Written in a way for AppleOS to accept/understand
- Written in a way for AndroidOS to accept/understand

Architecture in System:

- External Payment System
    - Card Reader
    - Bank
- Inventory Database
- Cloud
- Sales Database
- Register/POS Access
- AppleOS
- AndroidOS
- Cameras/Scanner

Classes in System:

- Item
    - double price
    - int quantity
    - int numID
    - string size
    - string color
- Employee
    - int empID
    - bool admin
- Store
    - int locationID
    - int numEmployee
    - int numAdmin
- Register
    - scanSearch(“Scanner Class”)
    - idSearch(ID)
    - refund()

        - sell()
- Cloud System
    - Inventory
        - viewStock(int ID)
        - Item Class
    - Transaction history
        - viewNumSales(int ID)
        - viewNumRefunds(int ID)
    - Sales history
        - viewQuarterlySales()
        - viewYearlySales()