

ER Diagram:

Relational Schema:

Auction(AuctionID: int, EndAuction: datetime, MinimumPrice: float, BidIncrement: float, InitialPrice: float, Seller: varchar(100), CurrentBid: float, CurrentBuyer: varchar(100), itemid: int, primarykey(AuctionID, CurrentBid, itemid), foreign key(Seller) references Users, foreign key (CurrentBuyer) references Users, foreign key(item) references Item).

Item(itemID: int, Description: varchar(100), isPSU: boolean, watts: float, efficiency: float, size: float, isMotherboard: bool, RAMSlots: int, Chipset: varchar(10), numStorageConnectors: int, isCPU: boolean, numCores: int, socket: varchar(20), productLine: varchar(20), isGPU: boolean, VRAM: int, isHD: boolean, storagesize: int, isRAM: boolean, ramcapacity: int, clockfrequency: float, sticktype: varchar(25), isMonitor: boolean, monitorSize: float, refreshrate: int, resolution: varchar(20), primary key(intemID))

Sell(itemID: int, email\_address:varchar(100), primary key(itemID, email\_address), foreign key(itemID) references Item, foreign key(email\_address) references Users)

Users(name: varchar(100), street\_address:varchar(300), phone\_number: varchar(15), email\_address:varchar(100), password:varchar(30), primary key(email\_address))

End-users(name: varchar(100), street\_address:varchar(300), phone\_number: varchar(15), email\_address:varchar(100), password:varchar(30), business\_name:varchar(100), owners:varchar(100), officers:varchar(100), directors:varchar(100), account\_managers:varchar(100), business\_address:varchar(300), business\_type:varchar(100), primary key(email\_address))

Staff(name: varchar(100), street\_address:varchar(300), phone\_number: varchar(15), email\_address:varchar(100), password:varchar(30), primary key(email\_address))

Help(staff\_email: varchar(100), user\_email:varchar(100), primary key(staff\_email, user\_email), foreign key(staff\_email) references Staff, foreign key(user\_email) references End-user)

Customer\_representative(name: varchar(100), street\_address:varchar(300), phone\_number: varchar(15), email\_address:varchar(100), password:varchar(30), primary key(email\_address))

Administrative\_staff(name: varchar(100), street\_address:varchar(300), phone\_number: varchar(15), admin\_email\_address:varchar(100), customer\_rep\_email:varchar(100), password:varchar(30), sales\_report\_ID:int, primary key(admin\_email\_address), foreign key(sales\_report\_ID) references Sales\_report, foreign key(customer\_rep\_email) references Customer\_representative not null)

Sales\_report(sales\_report\_ID:int, total\_earnings:float, best\_selling\_item:varchar(100), best\_selling\_user:varchar(100), earnings\_per\_item:float, earnings\_per\_type:float, earnings\_per\_end\_user:float, primary key(sales\_report\_ID))

Alert(alert\_ID:int, auction\_ID:int, item\_ID:int, buyer\_email\_address:varchar(100), time:datetime, date:datetime, primary key(alert\_ID, auction\_ID, item\_ID, buyer\_email\_address), foreign key(auction\_ID) references Auction, foreign key(item\_ID) references Item, foreign key(buyer\_email\_address) references End\_users)