**Spartan Market**

**Team 17**

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Project Design

1. Entity Sets
   1. *Users* – This set represents the ‘registered’ users in the application. By ‘registering’, the users provide us with personal data such as first name, last name, address, phone number and, set up a password for account creation.
   2. *PayingUsers* – Users become PayingUsers when they are in the middle of purchasing any items off the website. These users are asked to input their credit card information like, cardholder name, card number and address. An important point to note here, is that as PayingUsers have the same attributes as Users relation along with some attributes of its own, there is an ISA relationship between them.
   3. *Addresses* – This entity set collects all the addresses that are input in the website including, users’, paying users’ and suppliers’ addresses. Each entity in Addresses has a unique ID that will be used as foreign keys for its corresponding relationships.
   4. *Items* – This entity set represents all the items that are being sold in the website and have information like, name, description, stock, category, price, shipping days and is linked to a Supplier entity.
   5. *Suppliers* – This has information for all the suppliers who are selling the items on the website. Each entity is identified by a primary ID key, name, type of product associated with a supplier.
2. Relationships
   1. *HaveU, HavePU, HaveS* – These three relationships link a User, PayingUser and a Supplier to entities in Address, respectively. In our design, a User and a Supplier can have many addresses and also, the same address can be used by many Users, PayingUsers and Suppliers so, this is a Many-to-Many relationship.
   2. *Supply* – This relates a Supplier to an Item. An entity in Supply has information such as itemID and supplierID.
   3. *Carts* – Every paying user needs to have a Cart associated with it, so the items can be put there before a purchase. An entity in Carts has information such as userID, itemID, total price and quantity.
3. Schemas
   1. Users (User ID, Password, First Name, Last Name, Phone Number);
   2. Items (Item ID, Name, Description, Category, Price, image);
   3. Payingusers (CardNumber, CardHolderName, Expiration, CardsAccepted);
   4. Addresses (addressID, Street, City, State, Zip);
   5. Supplies (Supplier ID, Name);
   6. Supply (itemID, supplierID);
   7. HaveU (userID, addressesID);
   8. HavePU (PayingUsersCardNumber, addressesID);
   9. HaveS (supplierID, addressesID);