PDA (Personal Database Application)

(a) Personal Database Application for an e-commerce store (website), which is hosting a place for sellers to post items for sale and buyers to buy them. The store employs employees who work in departments. The store collects payments from buyers and submits payments to sellers.

(b) Entity relationship diagram. See attached.

(c) When a new seller posts their first item, three tuples are created as follows: one in the Seller table, second in the Post relation and third in the Item table:

- The Seller table is updated with a tuple containing information about the seller – seller ID, password, name, address and phone number.
- The Post relation is updated with a tuple containing information about the post – seller ID, item ID and date.
- The Item table is updated with a tuple containing information about the item – item ID, name, price, category and quantity.

When an item is bought by a repeat buyer, Buy relation and Item table are updated:

- The 'Quantity' attribute is updated in the Item table corresponding to the item bought
- Buy relation is updated with a tuple containing information about the purchase – item ID, buyer ID and date.