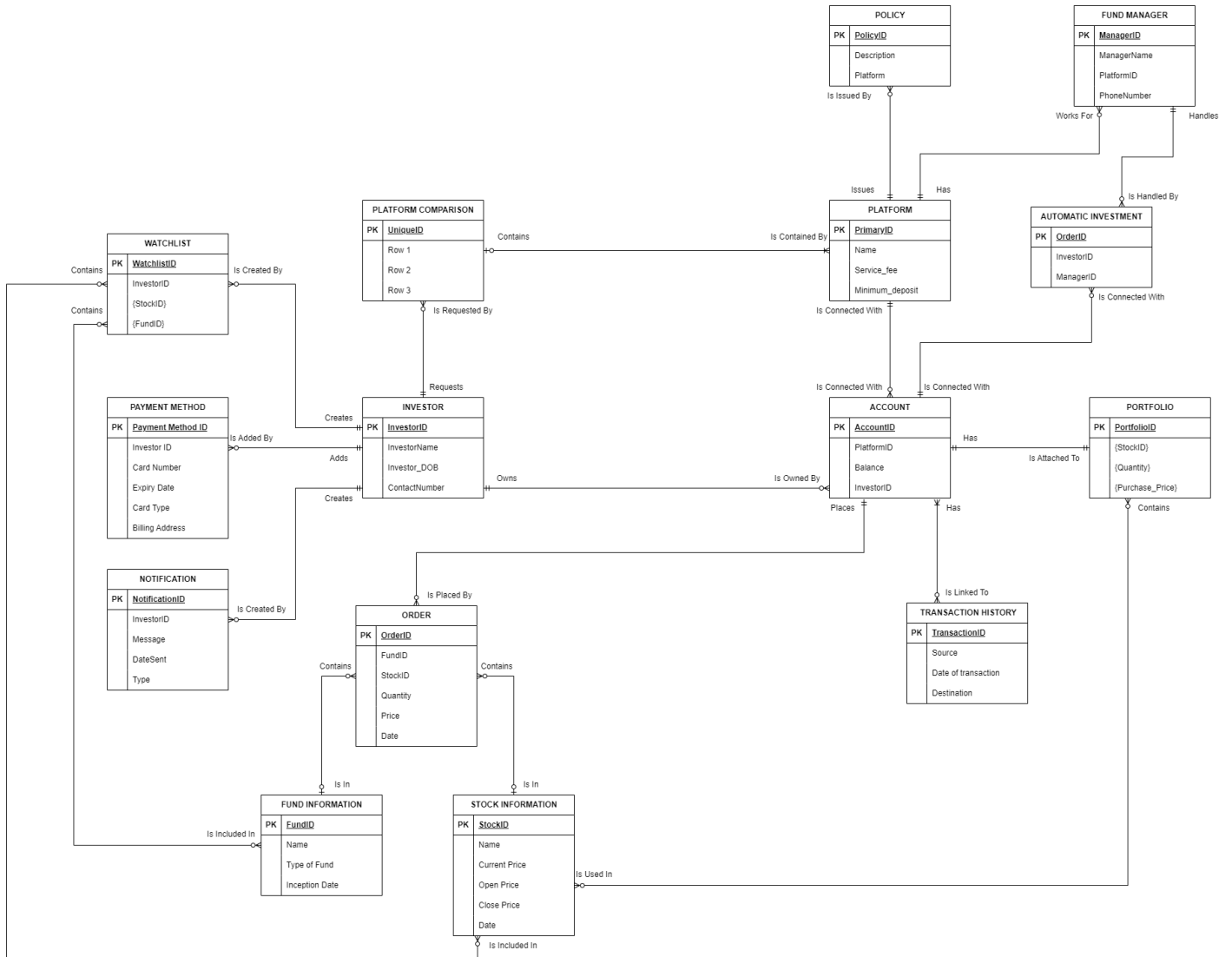
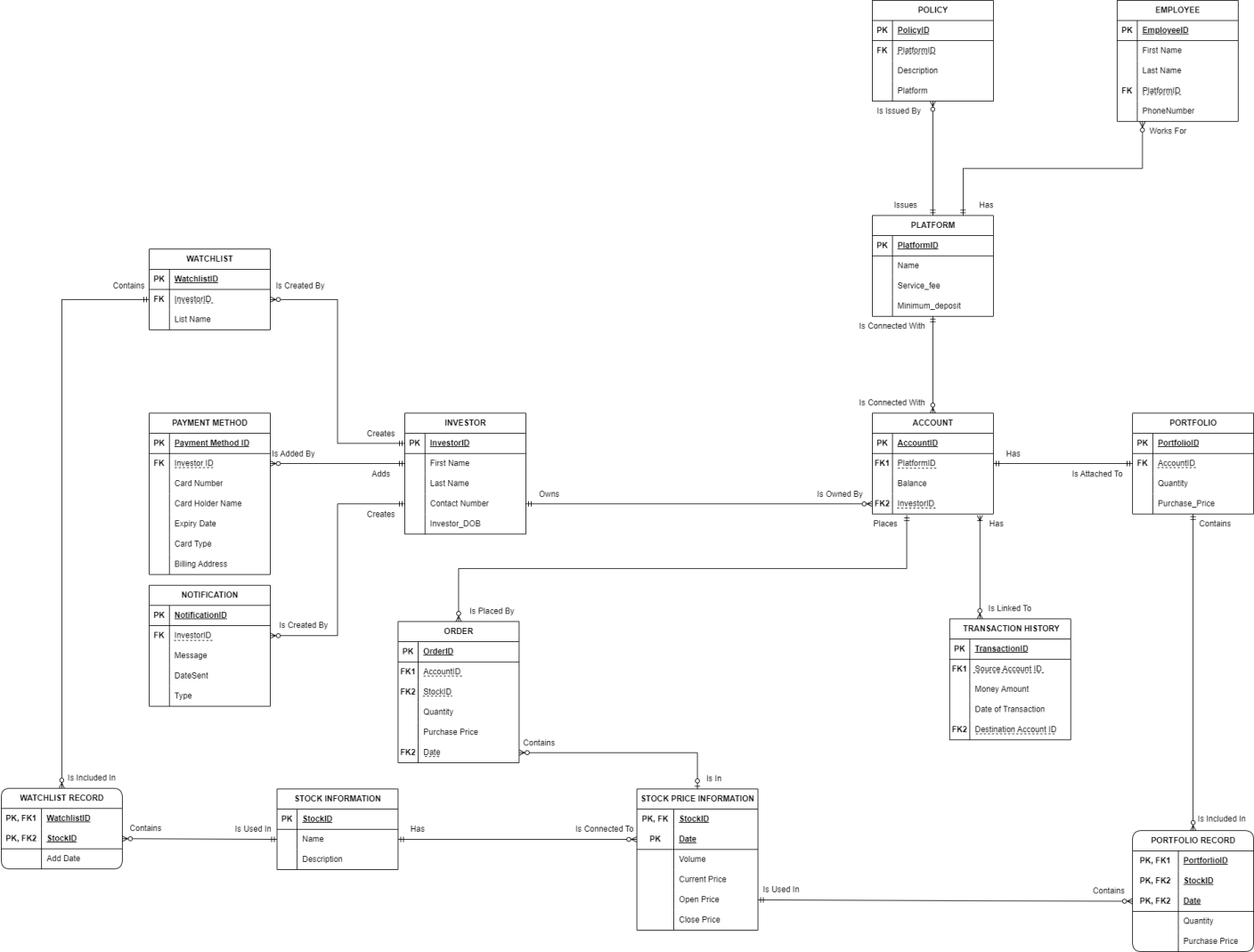


DAMG6210 Group01 Final ERD Design Changes

Old ERD for P2:



New ERD for P3:



There is one many-to-many relationship remaining between TRANSACTION HISTORY and ACCOUNT. TRANSACTION HISTORY is used to record the money transaction between accounts. Each transaction must be related to two accounts and each account might be involved in 0 or many transactions. So this many-to-many relationship can't be normalized.

Main Design Changes:

1. Entity FUND INFORMATION is deleted because it may cause some redundancy in the system.
2. Entity PLATFORM COMPARISON is deleted because it can be seen as the output of the system, not an entity.
3. Entity AUTOMATIC INVESTMENT is deleted because this entity doesn't have much to do with solving our business problem. Meanwhile, the FUND MANAGER is replaced by the EMPLOYEE to ensure this entity still has actual business meaning in this system.
4. STOCK INFORMATION in the old ERD is replaced by the STOCK PRICE INFORMATION and a new STOCK INFORMATION is added. In the old ERD, the STOCK INFORMATION can only store one day's price information. To store multiple day's information, we firstly set



StockID and Date as a composite primary key. However, in this case, there is a partial dependency between Name and StockID. So during the normalization, we create a new STOCK INFORMATION to store the basic stock information and use STOCK PRICE INFORMATION to store daily price information.

5. Associative entity WATCHLIST RECORD is added to replace the many-to-many relationship between STOCK INFORMATION and WATCHLIST. The primary key of this entity is composed of WatchlistID which is a foreign key and StockID which is also a foreign key.
6. Associative entity PORTFOLIO RECORD is added to replace the many-to-many relationship between STOCK PRICE INFORMATION and PORTFOLIO. The primary key of this entity is composed of PortfolioID which is a foreign key, StockID and Date which is another foreign key.