SQL Exercises Part 2: Feb.6

Name:________________________________________________

When prompted, start answering the queries below. You must first write down your solutions on this paper. Do NOT start coding until we ask you to. You will submit both the paper solutions (end of the class) and you will submit the code (on github) at the end of class (latest by 3:30pm today – no extensions). Aim to complete at least three queries from each set of exercises (1,2,3).

The queries use the bank database schema defined earlier.

Exercise 1:
1. Use the set union operator to Find customers (ID) who have a loan or a deposit at the Foggy Bottom branch
2. Use the set union operator to Find names and IDs of customers who have a loan or a deposit at the Foggy Bottom branch.

Use the set membership operators (IN, EXISTS, etc.) to solve queries 3—6.
3. Find all customers (IDs) who have both a loan and an account at the GWU branch (this implements set intersection in MySQL)
4. Find customers (IDs) who have an account but no loan at the bank (this implements the set difference operator).
5. Find branches that have greater assets than some branch located in DC.
6. Find all customers (ID) who have an account at some branch located in DC

Exercise set 2:
7. Find average balance across all accounts in the bank
8. Find the maximum loan given by the bank
9. Find the number of customers with accounts at GWU branch.
10. Find the customer ID with the largest balance.

Exercise 3:
11. Find average balance at each branch
12. Find the number of customers at each branch.
13. Find branches, and their average balance, where the average balance is greater than 1200
14. Find average balance at branches with at least three customers
15. Find average balance of depositors (i.e, customers who are account holders) who live in Philadelphia and have at least two accounts.
16. Find the branches with the highest average balance. (Note: you cannot compose aggregate functions so you have to use nested queries.)