

# Course ISE 431: Distributed Information Systems

## Recitations 6-7 Bank Exercise

Michael J. May

November 24, 2009 and December 1, 2009

For the following recitation you will implement a RPC application using the Java RMI tools. You should implement the following classes:

**Account** An object which represents a bank account interface. It has functions:

- Deposit(int amount)
- Withdrawal (int amount)
- GetAccountNumber()
- GetAccountName()
- GetBalance()

**BankServer** Publishes a set of bank accounts which can be accessed remotely. The bank should publish two sets of remote objects:

- A vector of the account numbers stored by the bank
- For each account stored, a remote object for each account. Each account object should be run with `rebind()` to tie the account object to the account number (ex. `rmi://localhost/12345` for account 12345).

**AccountList** A wrapper class to provide the list of accounts to clients. The wrapper class can have the following functions:

- Vector GetAccountList()

The function returns a normal Java Vector (or array if you wish) which contains the addresses of the accounts held by the bank.

**Bank Client** Uses the Bank Server to print out the available accounts and enable users to update accounts remotely using the functions in the Account objects.

Set up your server on one computer (using `javac`, `rmic`, and `rmiregistry`) in the lab and the clients on two other computers. Run the clients in parallel and watch what happens between the two clients as the accounts are updated.