

Why Mutual Exclusion?

- **Bank's Servers in the Cloud:** Two of your customers make simultaneous deposits of \$10,000 into your bank account, each from a separate ATM.
 - Both ATMs read initial amount of \$1000 concurrently from the bank's cloud server
 - Both ATMs add \$10,000 to this amount (locally at the ATM)
 - Both write the final amount to the server
 - **You lost \$10,000!**
- **The ATMs need *mutually exclusive* access to your account entry at the server**
 - **or, mutually exclusive access to executing the code that modifies the account entry**