Activity 8

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1. **Classes:**
   - **Account**: Generic parent abstract class, has ability Compute Interest and Compute Fees but does not implement these, has credit and debit
   - **Checking Account**: Extends Account, unlimited withdraws, no monthly fee, overdraft fee
   - **Savings Account**: Extends Account, limited withdraws, monthly fee if you don't deposit X dollars per month, no overdraft fee

2. **Fields:**
   - **Account**:

     ```
     public String accountName;
     public double balance, interestRate;
     public double deposit(double amount);
     public double withdraw(double amount);
     public abstract double ComputeInterest(this.balance, this.interestRate);`
     public abstract double ComputeFees();```
     ```
   - **ChekcingAccount**:

     ```
     extends Account;
     ```
   - **SavingsAccount**:

     ```
     extends Account;
     private double monthlyFee;
     private double chargedThisMonth;
     ```

3.

```
public class Account{
  private double balance;
  private String name;
  private double fees;

  public Account(String name, double balance) {
    this.name = name;
    this.balance = balance;
  }

  public double getBalance(){ return this.balance; }
  public double getName(){ return this.name; }
  public void deposit(double mons){ this.balance += mons; }
  public void withdraw(double mons){
    if (mons > this.balance) System.out.println("Not Allowed!");
```

```
    else this.balance -= mons;
  }
  @Overide
  public String toString() {
    return this.name + " has $" + this.balance + " as a balance";
  }
}
public class CheckingAccount extends Account {
  public static double OVERDRAFT_FEE = 35.0;

  public CheckingAccount(String name, double balance) {
    super(name, balance);
  }

  public void withdraw(double amount) {
    super.withdraw(amount);

    if (this.balance < amount) this.fees += OVERDRAFT_FEE;
  }

  public void deposit(double amount) {
    super.deposit(amount)
  }


}

public class SavingsAccount() extends Account {
  private double monthlyFee;
  private double chargedThisMonth;

  public SavingsAccount(String name, double balance, double monthlyFee) {
    super(name, balance);
    this.monthlyFee = monthlyFee;
    this.chargedThisMonth = 0;
  }

  public void withdraw(double amount) {
    if (this.balance < amount) {
      System.out.println("Too Much!");
    }
    this.balance -= amount;
  }

  public void deposit(double amount) {
    chargedThisMonth += amount;
```

```
    balance += amount;
  }

}
```