

## Computer Science 212

### Object-Oriented Programming in Java

#### Lab 17

##### **Aim: Extending a Class: Money.**

Create a new project in Eclipse called Lab 17, and import the files from Z:\Lab17.

Open all the files.

Observe the class hierarchy

The abstract class *Money* extends to *Bill* and *Coin*.

*Coin* extends to *Quarter*.

Read through the *MoneyMain* application and understand how it works.

Write classes for *Penny*, *Nickel* and *Dime* using class *Quarter* as a reference.

Add some pennies, nickels and dimes to the *dataSource* array and modify the *main* method so that it will add pennies, nickels and dimes to the *wallet*.

Run the main application to see that it works.

Notice in the method *printWallet* that the output string for a *Bill* is complicated and the output string for a *Coin* is simple. This is because *Coin* has a *toString* method. Provide class *Bill* with a similar *toString* method and rewrite the output string in *printWallet* for the *Bills*.

Write a method for the main application called *sumWallet* which adds all the money in the wallet and prints the amount to the console.