//Glass

public class Glass {

private float capacity = (float)0.5;

private float quantity = (float)0.0;

Glass(){}

Glass(float capacity){

this.capacity=capacity;

}

public float getQuantity() {

return quantity;

}

public float getCapacity(){

return capacity;

}

public void setCapacity(float quantity){

this.quantity = quantity;

}

public void fill(float c){

this.quantity += c;

}

public void status(){

System.out.print("Glass::: ");

if(quantity == 0.0){

System.out.println("Empty");

}

else if(capacity == quantity){

System.out.println("Full");

}

else if(capacity > quantity){

System.out.println("Have " + quantity + " units");

}

else if(capacity < quantity){

System.out.println("Overflowed");

}

}

}

//JUG

public class Jug {

private float capacity = (float)3.0;

private float quantity = (float)0.0;

Jug(){}

Jug(float capacity){

this.capacity = capacity;

}

Jug(float capacity,float quantity){

this.capacity = capacity;

this.quantity = quantity;

}

public float getCapacity(){

return capacity;

}

public void setCapacity(float quantity){

this.quantity = quantity;

}

public void fill(float q){

quantity += q;

}

public void pour(Glass g,float q){

g.fill(q);

this.quantity -= q;

}

public void status(){

System.out.print("Jug::: ");

if(quantity == 0.0){

System.out.println("Empty");

}

else if(capacity > quantity){

System.out.println("Have " + quantity + " units");

}

else if(capacity < quantity){

System.out.println("Overflowed");

}else if(capacity == quantity){

System.out.println("Full");

}

}

}

//HUMAN

public class Human {

private String name;

private float d= 0;

Human(){}

Human(String name){

this.name=name;

}

public String getName(){

return name;

}

public void setName(String name){

this.name= name;

}

public void fillGlass(Glass g, Jug j,float quantity){

j.pour(g, quantity);

}

public void fillJug(Jug j,float quantity){

j.fill(quantity);

}

public void drink(Glass g, float quantity){

g.fill(-quantity);

d +=quantity;

}

public void status(){

System.out.println(name + " consumed " + d + " units");

}

public static void main(String[] args) {

Jug j = new Jug(5.0f);

Glass g = new Glass();

Human m = new Human("Mickey");

m.fillJug(j, 4.0f);

System.out.print("Before filling glass with water: " );

j.status();

m.fillGlass(g, j, .4f);

System.out.print("After filling glass with water: " );

j.status();

System.out.print("Before drinking: " );

g.status();

m.drink(g, .4f);

m.status();

System.out.print("After drinking: " );

g.status();

}

}

