client

================================================

package client\_machine;

/\*\*

\*

\* @author gawitt

\*/

public class Client\_Machine {

/\*\*

\* @param args the command line arguments

\*/

public static void main(String[] args) {

Machine c1 = new Car("Ford", "Explorer",20000);

c1.move();

c1.setValue(500);

c1.setColor("Black");

System.out.println(c1.toString());

System.out.println("");

c1.move();

Boat b1 = new Boat(350,2000);

b1.move();

b1.setValue(20000);

b1.setLocation("Lake");

System.out.println(b1);

System.out.println("");

b1.move();

System.out.println(b1);

SnowMobile s1 = new SnowMobile("Burton","Chilly",120);

s1.move();

s1.setValue(12000);

s1.setLocation("Moutain");

System.out.println(s1);

System.out.println("");

s1.move();

System.out.println(s1);

Machine[] arrayOfStuff = new Machine[10];

for (int i = 0; i < arrayOfStuff.length; i++) {

if(i % 2 == 0)

{arrayOfStuff[i] = new Boat(i\*10,i\*100);}

else

{arrayOfStuff[i] = new Car();}

}//for

for (int i = 0; i < arrayOfStuff.length; i++){

arrayOfStuff[i].move();

}//i

}//main

}//Client\_Machine

output:

run:

This is a car .. you drive it on the road!

Machine

color=Black

location=Not placed yet

value=500.0

Is there a loan? false

Car:

make=Ford

model=Explorer

miles= 20000

Value 500.0

tax: 15.0we have 1 things

\*\*\*\*\*\*\*\*\*\*\*\*

This is a car .. you drive it on the road!

This baby is a money-pit sell now

Machine

color=none

location=Lake

value=20000.0

Is there a loan? false

Boat

horsePower=350

hours= 2000

Value: 20000.0

Tax: 1600.0

we have 2things

\*\*\*\*\*\*\*\*\*\*\*\*\*

This baby is a money-pit sell now

Machine

color=none

location=Lake

value=20000.0

Is there a loan? false

Boat

horsePower=350

hours= 2000

Value: 20000.0

Tax: 1600.0

we have 2things

\*\*\*\*\*\*\*\*\*\*\*\*\*

This is a Snowmobile..... it collects dust until it snows. thanks global warming

Machine

color=none

location=Moutain

value=12000.0

Is there a loan? false

Snowmobile Burton

Model= Chilly

Value= 12000.0

Tax: 960.0

we have 3things

\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

This is a Snowmobile..... it collects dust until it snows. thanks global warming

Machine

color=none

location=Moutain

value=12000.0

Is there a loan? false

Snowmobile Burton

Model= Chilly

Value= 12000.0

Tax: 960.0

we have 3things

\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

This baby is a money-pit sell now

This is a car .. you drive it on the road!

This baby is a money-pit sell now

This is a car .. you drive it on the road!

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This baby is a money-pit sell now

This is a car .. you drive it on the road!

BUILD SUCCESSFUL (total time: 1 second)

Machine: Class

/\*

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\*/

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\* @author gawitt

\*/

public abstract class Machine implements TaxInfo {

private String color;

private String location;

private double value;

private boolean loan;

static int things = 0;

//constructor with defaults

public Machine(){

things++;

color = "none";

location = "Not placed yet";

value = 0;

loan = false;

}//default constructors

public Machine(String color, String location, double value){

things++;

loan = false;

this.color = color;

this.location = location;

this.value = value;

}//Machine w args

public String getColor(){

return color;

}//getColor

public void setColor(String color){

this.color = color;

}//setColor

public String getLocation() {

return location;

}//getLocation

public void setLocation(String location) {

this.location = location;

}//setLocaiton

public double getValue() {

return value;

}//getValue

public void setValue(double value) {

this.value = value;

}//setValue

public boolean isLoan(boolean loan) {

return loan;

}//setLoan

public void setLoan(boolean loan) {

this.loan = loan;

}//setLoan

public static int getThings() {

return things;

}//getThings

public abstract void move();

@Override

public String toString(){

String ans = "Machine" + "\ncolor=" + color +

"\nlocation=" + location + "\nvalue=" + value + "\nIs there a loan? " + loan + "\n";

return ans;

}//toString

}//abstract Machine class

Car:

/\*

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public class Car extends Machine implements TaxInfo{

String make;

String model;

int miles;

public Car(){ super();} //no arg constructor

public Car(String make, String model, int miles){

super();

this.make = make;

this.model = model;

this.miles = miles;

}//Car w args

public void move(){

System.out.println("This is a car .. you drive it on the road!");

}//move

@Override

public String toString(){

String ans = super.toString() + "Car: " + "\nmake=" + make + "\nmodel=" + model

+ "\nmiles= " + miles + "\n" +

"Value " + getValue() + "\n" + "tax: " + calcTax() +

"we have " + things + " things \n\n\*\*\*\*\*\*\*\*\*\*\*\*";

return ans;

}//CartoString

public double calcTax(){

return getValue() \* BASIC\_TAX;

}//calcTax

}//class

Boat: Class

/\*

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\*/

public class Boat extends Machine implements TaxInfo{

private int horsePower;

private int hours;

public Boat(int h, int hr){

super();

this.hours = hr;

this.horsePower = h;

}//boat w args

public String toString(){

String ans;

ans = super.toString();

ans = ans + "Boat" + "\nhorsePower=" + horsePower +

"\nhours= " + hours + "\nValue: " + getValue() + "\n" + "Tax: " + calcTax() +

"\n we have " + things + "things\n\n\*\*\*\*\*\*\*\*\*\*\*\*\*\n";

return ans;

}//toString

@Override

public double calcTax(){

return getValue() \* LUXURY\_TAX;

}//calc

@Override

public void move(){

System.out.println("This baby is a money-pit sell now");

}//move

}//Class Boat

Tax info: interface

package client\_machine;

/\*\*

\*

\* @author gawitt

\*/

public interface TaxInfo {

final double BASIC\_TAX = .03;

final double LUXURY\_TAX = .08;

public double calcTax();

}//Tax

SnowMobile: Object

package client\_machine;

/\*\*

\*

\* @author gawitt

\*/

public class SnowMobile extends Machine implements TaxInfo {

String make; //toyota

String model; //something

int hours;

public SnowMobile(){}//no arg constrcutor

public SnowMobile(String make, String model, int hours){

this.make = make;

this.model = model;

this.hours = hours;

}//Snowmobile w args

@Override

public void move(){

System.out.println("This is a Snowmobile..... it collects dust until it snows. thanks global warming");

}//move

@Override

public double calcTax(){

return getValue() \* LUXURY\_TAX;

}//calcTax

@Override

public String toString(){

String ans;

ans = super.toString();

ans = ans + "Snowmobile " + make + "\nModel= " + model + "\nValue= " +

getValue() + "\n" + "Tax: " + calcTax() + "\n we have " + things + "things\n\n \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\n";

return ans;

}//toString

}//SnowMobile