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\*/

package javaapplication17;

/\*\*

\*

\* @author enas

\*/

//abstract class

public abstract class Animal

{

protected int age;

protected String gender;

public Animal()

{

age= 1;

gender= "female";

System.out.println("hello from Animal constructor");

}

public void test()

{

System.out.println("abstract class function: test( )");

}

public abstract void breathe();// abstract method

public static void main(String[] args)

{

// Animal m = new Animal(); wrong

Cat t = new Cat("mimi");

Bird b = new Bird();

Animal a= new Cat("lolo");

Animal m= new Bird();

Animal[] an= new Animal[4];

an[0]= t;

an[1]= b;

an[2]= a;

an[3]= m;

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

{

an[i].breathe();

if(an[i] instanceof Bird)

{ Bird rr;

rr= (Bird)an[i];

rr.fly();

}

}

}

}

/\*

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public class Bird extends Animal implements IAnimal

{

public void fly()

{System.out.println("Bird is flying");}

@Override

public void breathe()

{

System.out.println("Bird is breathing");

}

}

/\*

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//concrete class

public class Cat extends Animal

{

private String name;

public Cat(String name)

{ //super();

this.name= name;

}

@Override

public void breathe()

{

System.out.println("Cat is breathing");

}

public String toString()

{

return name+ " "+ gender+" " + age;

}

}

/\*

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public interface IAnimal

{

// fields are implicitly public, static and final

String TYPE="PET";

// methods in the interface are public and abstract

void breathe();

}