Class 24 Java

package class24;

import java.util.ArrayList;

public class ArrayListDemo1 {

public static void main(String[] args) {

//Syntax to create an arrayList

ArrayList<String> colors=new ArrayList<>();

//use add method to insert elements in an arrayList

colors.add("Red");

colors.add("Green");

colors.add("Blue");

colors.add("Yellow");

colors.add("Black");

//prints all the elements

System.out.println(colors);

// get method prints individual elements from arraylist

System.out.println(colors.get(0));

System.out.println(colors.get(2));

//size me

System.out.println(colors.size());

//getting all the elements through normal loop

for (int i = 0; i < colors.size(); i++) {

System.out.println(colors.get(i));

}

System.out.println("\*\*\*\*\*\*\*\*\*\*\*\*\*\*");

//getting all the elements through enhanced loop

for(String color:colors){

System.out.println(color);

}

}

}

package class24;

import java.util.ArrayList;

public class ArrayListDemo2 {

public static void main(String[] args) {

ArrayList<Integer> numbers=new ArrayList<>();

numbers.add(10);

numbers.add(20);

numbers.add(35);

int a=34;

numbers.add(a);

System.out.println(numbers);

for(Integer num:numbers){

System.out.println(num);

}

//int => Integer

// boolean => Boolean

// byte => Byte

// double => Double

// long => Long

// float => Float

// char => Character

}

}

package class24;

import java.util.ArrayList;

public class ArrayListDemo3 {

public static void main(String[] args) {

//how to store chars in arrayList

// ArrayList<Character> chars=new ArrayList<>(new ArrayList<>(Arrays.asList('E','F')));

ArrayList<Character> chars=new ArrayList<>();

chars.add('A');

chars.add('B');

chars.add('C');

chars.add('Z');

chars.add('G');

System.out.println(chars);

ArrayList<Boolean> booleans=new ArrayList<>();

booleans.add(false);

booleans.add(false);

booleans.add(true);

System.out.println(booleans);

ArrayList<Float> floats=new ArrayList<>();

floats.add(12.5F);

floats.add(12f);

System.out.println(floats);

}

}

package class24;

import java.util.ArrayList;

public class ArrayListDemo4 {

public static void main(String[] args) {

ArrayList<String> names=new ArrayList<>();

names.add("Tymur");

names.add("Salma");

names.add("MJ");

names.add("Josh");

names.set(2,"Josh Again");

System.out.println(names);

ArrayList<Integer> numbers=new ArrayList<>();

numbers.add(10);

numbers.add(25);

numbers.add(35);

numbers.add(1,100);

numbers.set(0,12000);

System.out.println(numbers);

numbers.clear(); // deletes all the elements from the list

System.out.println(numbers);

}

}

package class24;

import java.util.ArrayList;

public class ArrayListDemo5 {

public static void main(String[] args) {

ArrayList<String> colors=new ArrayList<>();

//use add method to insert elements in an arrayList

colors.add("Red");

colors.add("Green");

colors.add("Blue");

colors.add("Yellow");

colors.add("Black");

System.out.println(colors);

// colors.remove("Blue");

colors.remove(2);

System.out.println(colors);

}

}

package class24;

public class Cat {

String name;

String breed;

int age;

double weight;

//12:15

/\*

Create a horse class

have 5 fields of your choice

create constructor and getter setter methods for this class

atleast write one coniditon inside setter class

\*/

public Cat(String name, String breed, int age, double weight) {

setName(name);

setBreed(breed);

setAge(age);

setWeight(weight);

}

public String getName() {

return name;

}

public void setName(String name) {

this.name = name;

}

public String getBreed() {

return breed;

}

public void setBreed(String breed) {

this.breed = breed;

}

public int getAge() {

return age;

}

public void setAge(int age) {

this.age = age;

}

public double getWeight() {

return weight;

}

public void setWeight(double weight) {

this.weight = weight;

}}

package class24;

public class Dog {

private String name;

private String breed;

private int age;

private double weight;

public Dog(String name, String breed, int age, double weight) {

setName(name);

setBreed(breed);

setAge(age);

setWeight(weight);

}

void setName(String name) {

if (name.length() > 30) {

System.out.println("Name can't be more than 30 letters. Please try again");

} else if (name.isEmpty()) {

System.out.println("Name can't be empty Please try again");

} else {

this.name = name;

}

}

void setWeight(double weight) {

if (weight < 0) {

System.out.println("Negative weight is not allowed. Please try again");

} else if (weight > 300) {

System.out.println("Please try less than 300 it looks more of a elephant");

} else {

this.weight = weight;

}

}

void setAge(int age) {

if (age > 20) {

System.out.println("Please use less age something seems wrong here are you sure its a dog?");

} else if (age < 0) {

System.out.println("age can't be negative");

} else {

this.age = age;

}

}

void setBreed(String breed) {

if (breed.length() > 20) {

System.out.println("Breed can't be more than 20 letters. Please try again");

} else if (breed.isEmpty()) {

System.out.println("Breed can't be empty Please try again");

} else {

this.breed = breed;

}

}

String getName(){

return name;

}

String getBreed(){

return breed;

}

int getAge(){

return age;

}

double getWeight(){

return weight;

}

void printInfo() {

System.out.println("Name " + name + " Breed " + breed + " Age " + age + " Weight " + weight);

}

}

class Test {

public static void main(String[] args) {

Dog tommy = new Dog("Tommy", "German", 10, 20);

/\* tommy.name="Tommy";

tommy.breed="German";

tommy.age=15;

tommy.weight=20;\*/

// System.out.println(tommy.name);

System.out.println(tommy.getName());

tommy.printInfo();

}

}

package class24;

public class Horse {

private String name;

private String breed;

private String color;

private int age;

public Horse(String name, String breed, String color, int age) {

setName(name);

setBreed(breed);

setColor(color);

setAge(age);

}

public String getName() {

return name;

}

public void setName(String name) {

if(name.isEmpty()){

System.out.println("Name can't be empty");

}else {

this.name = name;

}

}

public String getBreed(String name) {

if(name.equals("Josh")){

return " Not allowed";

}else {

return breed;

}

}

public void setBreed(String breed) {

if(breed.isEmpty()){

System.out.println("Breed can't be empty");

}else {

this.breed = breed;

}

}

public String getColor() {

return color;

}

public void setColor(String color) {

if(color.isEmpty()){

System.out.println("color can't be empty");

}else {

this.color = color;

}

}

public int getAge() {

return age;

}

public void setAge(int age) {

if(age<0){

System.out.println("Age can't be negative");

}else {

this.age = age;

}

}

}

package class24;

import java.util.ArrayList;

import java.util.Arrays;

public class WhyCollectionsFramework {

public static void main(String[] args) {

/\*

if we have to store a single value we should use variables

\*/

String name="Josh";

String name2="Joe";

System.out.println(name);

System.out.println(name2);

/\*

if we have to store more than 2 values of same kind then we should go with arrays

\*/

String[] names={"Reshad","Adam","Again josh"};

/\*

fixed in size

\*/

String[] breeds=new String[10];

breeds[0]="BullDogs";

System.out.println(Arrays.toString(breeds));

ArrayList<String> colors=new ArrayList<>();

colors.add("Green");

colors.add("Red");

System.out.println(colors.contains("Green"));

System.out.println(colors);

}

}

Notes