Documentación Video *20231011_1*

Durante la grabación se explican y resuelven ejercicios en concreto. Los principales ejerciciso abarcan temas como ***ArrayListSize, System.arraycopy, Circle, Cougar y Loop.***

Problema ArrayListSize

```java
public class ArrayListSize{
    public static void main(String[] args){
        ArrayList<Integer> list = new ArrayList<>();
        list.add(100);
        list.add(200);

        System.out.println(list.get(list.size()));
    }
}
```

Su salida para este problema sería el siguiente:

```
Exception in thread "main" java.lang.IndexOutOfBoundsException: Index 2 out of bounds for length 2
        at java.base/jdk.internal.util.Preconditions.outOfBounds(Preconditions.java:64)
        at java.base/jdk.internal.util.Preconditions.outOfBoundsCheckIndex(Preconditions.java:70)
        at java.base/jdk.internal.util.Preconditions.checkIndex(Preconditions.java:248)
        at java.base/java.util.Objects.checkIndex(Objects.java:372)
        at java.base/java.util.ArrayList.get(ArrayList.java:459)
        at ArrayListSize.main(ArrayListSize.java:9)
```

Problema “System.arraycopy”

```java
public class ArrayCopy{
    public static void main(String[] args){
        int[] array = {1,2,3,4,5};

        System.arraycopy(array, 2, array, 1, 2);
        System.out.print(array[1]);
        System.out.print(array[4]);
    }
}
```

Y su salida es la siguiente:

Problema Circle

```java
public class Circle{
    double radius;
    public double area;

    public Circle(double r){
        radius = r;
    }

    public double getRadius(){
        return radius;
    }

    public void setRadius(double r){
        radius = r;
    }

    public double getArea(){
        return;
    }

    class App{
        public static void main(String[] args) {
            Circle c1 = new Circle(17.4);
            c1.area = Math.PI * c1.getRadius() * c1.getRadius();
        }
    }
}
```

```
This class is poorly encapsulated. You need to change the circle class to compute and return the area
What three modifications are necessary to ensure that the class is being properly encapsulated?
A. Change the access modifier of the setradius () method to private
B. Change the getArea () method
public double getArea () { return area; }
C. When the radius is set in the Circle constructor and the setRadius () method, recomputed the area
store it into the area field
D. Change the getRadius () method:
```

La respuesta es el inciso B

Problema Cougar

```java
class Feline {
    public String type = "f";
    public Feline(){
        System.out.print("feline ");
    }
}

public class Cougar extends Feline{
    public Cougar(){
        System.out.print("cougar ");
    }

    void go(){
        type = "c";
        System.out.print(this.type + super.type);
    }
}
```

Problema de Loop

```java
class TestClass{
    public static void main(String[] args) {
        int k = 0;
        int m = 0;
        for (int i = 0; i < 3; i++) {
            k++;
            if (i == 2) {
                //line 1
            }
            m++;
        }
        System.out.println(k + ", " + m);
    }
}
```

Y aquí están las opciones de posibles respuestas, de las cuales se deben escoger 3 opciones

Please select 3 options

- [ ] It will print 3, 2 when line 1 is replaced by break;
- [ ] It will print 3, 2 when line 1 is replaced by continue.
- [ ] It will print 4, 3 when line 1 is replaced by continue.
- [ ] It will print 4, 4 when line 1 is replaced by i = m++;
- [ ] It will print 3, 3 when line 1 is replaced by i = 4;

Las cuales son: a, c y d