BCPR282 SYNTAX TEST # 2

Student Name _____ Marks out of 10 _____

Markers _____

Closed book, closed directory, no notes, individual test.

Write a program with a class called Fibonacci in which a getValues method which calculates the first n Fibonacci numbers F(n), where F(n)=F(n–1)+F(n–2) and F(1)=F(2)=1

Assume n has a lowest possible value of 3.

The getValues method should return the Fibonacci values in an array or collection class.

Also use a FibController Class which tests with a value of 20 and uses a for loop to display the values

The output shall look like:

```
STARTING
1 1 2 3 5 8 13 21 34 55 89 144 233 377 610 987 1597 2584 4181 6765
BYE!
```

❒ Answer is structured with correct MVC

❒ At least 3 different types of variable or field SCOPE*

❒ Definition of a class with a constructor*

❒ Definition* and initialization* of an object

❒ A "CONSTANT"*

❒ a primitive type***

❒ Correct use of the most appropriate Java Conditional Statement

❒ Correct use the Java initialization, termination, increment for loop

❒ Correct use the Java enhanced for loop to iterate an array or collection

❒ Correct definition*, initialization* and use of an Array or Collection class*

*– note with comments where they occur

eg `// SCOPE #1`

You MUST use the code provided over the page

```java
public class ConsoleView implements View {
    @Override
    public <T> void say(T message) {
        System.out.println(message + " ");
    }
    public <T> void add(T message) {
        System.out.print(message + " ");
    }
    @Override
    public void start() {
        say("STARTING");
    }
    @Override
    public void stop() {
        say("\nBYE!");
    }
}


public abstract class ExerciseController {
    protected View myView;
    public ExerciseController( View theView ){
        this.myView = theView;
    }

    abstract protected void doStuff();
    public void go() {
        this.myView.start();
        this.doStuff();
        this.myView.stop();
    }
}

public class Main {
    public static void main(String[] args) {
        View view = new ConsoleView();
        ExerciseController ec = new FibController( view );
        ec.go();
    }
}
```