Graded Exercise 0

CSC144 Software Architecture

23 March 2018

Put the statements that follow in a correct order for a program that defines a class that models a number that has two parts. The class includes methods for combining two such numbers arithmetically and a main() method that contains code for testing the class.

Add comments to label these parts of the program:

- instance variables
- constructor
- accessors (getters)
- a method that produces a printable representation of an object

The finished program will produce this output:

```
a = 3/4
b = 2/3
a + b = 17/12
a - b = 1/12
a * b = 1/2
a / b = 9/8
```

Scrambled source code.

```
return new SpecialNumber( n0 * d1 - n1 * d0, d0 * d1 );
System.out.println( "a = " + a );
```

```
    } // getSecondPart()
        else {
        return new SpecialNumber( n0 * d1, d0 * n1 );
            return helper( b, a % b );
        this.secondPart = secondPart/gcd;
        SpecialNumber a = new SpecialNumber(3, 4);
        return this.getFirstPart() + "/" + this.getSecondPart();
    public SpecialNumber minus( SpecialNumber otherSpecialNumber ) {
            return a;
    } // minus( SpecialNumber )

    } // toString()
        return this.secondPart;
        System.out.println( "a - b = " + a.minus(b) );
        int gcd = helper( firstPart, secondPart );
        int n0 = this.getFirstPart();
        return new SpecialNumber( n0 * n1, d0 * d1 );


        System.out.println( "a + b = " + a.plus(b) );
    public SpecialNumber over( SpecialNumber otherSpecialNumber ) {

} // SpecialNumber
        return this.firstPart;
        int n1 = otherSpecialNumber.getFirstPart();
    public int getSecondPart() {
        int n0 = this.getFirstPart();

    public static void main( String [] args ) {
    private final int firstPart;

    } // times( SpecialNumber )

        this.firstPart = firstPart/gcd;

        System.out.println( "b = " + b );
        int n1 = otherSpecialNumber.getFirstPart();



    public int getFirstPart() {

        return new SpecialNumber( n0 * d1 + n1 * d0, d0 * d1 );
    public String toString() {
        int n0 = this.getFirstPart();
        } // else
```

```
        } // if
    public SpecialNumber( int firstPart, int secondPart ) {
        int d0 = this.getSecondPart();
    private int helper( int a, int b ) {
        int d1 = otherSpecialNumber.getSecondPart();
package specialnumber;
    } // main( String [] )
        int d1 = otherSpecialNumber.getSecondPart();
        int d0 = this.getSecondPart();

public class SpecialNumber {
    } // helper( int, int )
        System.out.println( "a / b = " + a.over(b) );


        int d0 = this.getSecondPart();

    } // getFirstPart()
    public SpecialNumber plus( SpecialNumber otherSpecialNumber ) {
    } // over( SpecialNumber )

        int d0 = this.getSecondPart();
        if( b == 0 ) {


        SpecialNumber b = new SpecialNumber(2, 3);
    private final int secondPart;


        int d1 = otherSpecialNumber.getSecondPart();

    } // plus( SpecialNumber )
        int n1 = otherSpecialNumber.getFirstPart();
    public SpecialNumber times( SpecialNumber otherSpecialNumber ) {

        int d1 = otherSpecialNumber.getSecondPart();
        System.out.println( "a * b = " + a.times(b) );
        int n1 = otherSpecialNumber.getFirstPart();
    } // SpecialNumber( int, int )
        int n0 = this.getFirstPart();
    @Override
```