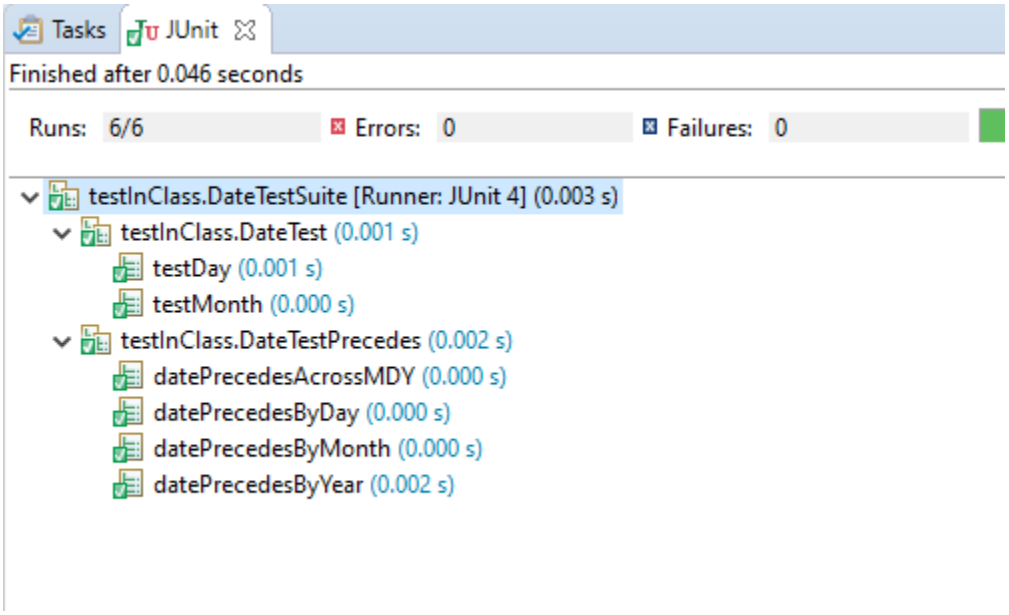
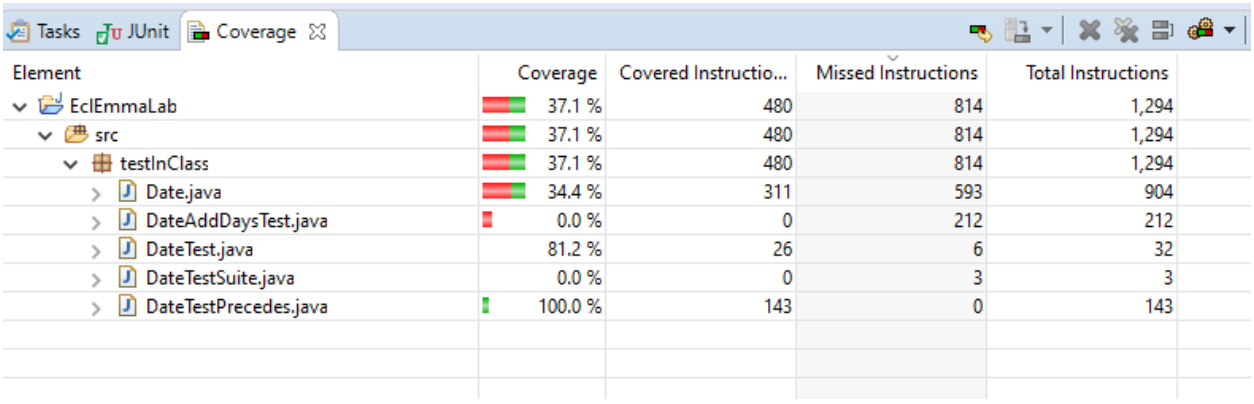
Ryan Hayes

EclEmmaLab

Step 1:



Step 2:



Element	Coverage	Covered Instructio...	Missed Instructions	Total Instructions
EclEmmaLab	37.1 %	480	814	1,294
src	37.1 %	480	814	1,294
testInClass	37.1 %	480	814	1,294
Date.java	34.4 %	311	593	904
DateAddDaysTest.java	0.0 %	0	212	212
DateTest.java	81.2 %	26	6	32
DateTestSuite.java	0.0 %	0	3	3
DateTestPrecedes.java	100.0 %	143	0	143

Step 3:

```
public int getMonth( )
{
    if (month.equals("January"))
        return 1;
    else if (month.equals("February"))
        return 2;
    else if (month.equalsIgnoreCase("March"))
        return 3;
    else if (month.equalsIgnoreCase("April"))
        return 4;
    else if (month.equalsIgnoreCase("May"))
        return 5;
    else if (month.equals("June"))
        return 6;
    else if (month.equalsIgnoreCase("July"))
        return 7;
    else if (month.equalsIgnoreCase("August"))
        return 8;
    else if (month.equalsIgnoreCase("September"))
        return 9;
    else if (month.equalsIgnoreCase("October"))
        return 10;
    else if (month.equals("November"))
        return 11;
    else if (month.equals("December"))
        return 12;
    else
    {
        System.out.println("Fatal Error");
        System.exit(0);
        return 0; //Needed to keep the compiler happy
    }
}
```

```
public void setDay(int day)
{
    if ((day <= 0) || (day > 31))
    {
        System.out.println("Fatal Error");
        System.exit(0);
    }
    else
        this.day = day;
}
```

Step 4:

```
public int getMonth( )
{
    if (month.equals("January"))
        return 1;
    else if (month.equals("February"))
        return 2;
    else if (month.equalsIgnoreCase("March"))
        return 3;
    else if (month.equalsIgnoreCase("April"))
        return 4;
    else if (month.equalsIgnoreCase("May"))
        return 5;
    else if (month.equals("June"))
        return 6;
    else if (month.equalsIgnoreCase("July"))
        return 7;
    else if (month.equalsIgnoreCase("August"))
        return 8;
    else if (month.equalsIgnoreCase("September"))
        return 9;
    else if (month.equalsIgnoreCase("October"))
        return 10;
    else if (month.equals("November"))
        return 11;
    else if (month.equals("December"))
        return 12;
    else
    {
        System.out.println("Fatal Error");
        System.exit(0);
        return 0; //Needed to keep the compiler happy
    }
}
```

```
public void setDay(int day)
{
    if ((day <= 0) || (day > 31))
    {
        System.out.println("Fatal Error");
        System.exit(0);
    }
    else
        this.day = day;
}
```

In getMonth, the cases for February and March are now covered. The boundaries for setDay were not yet covered, but the else case to set the day has now been covered.

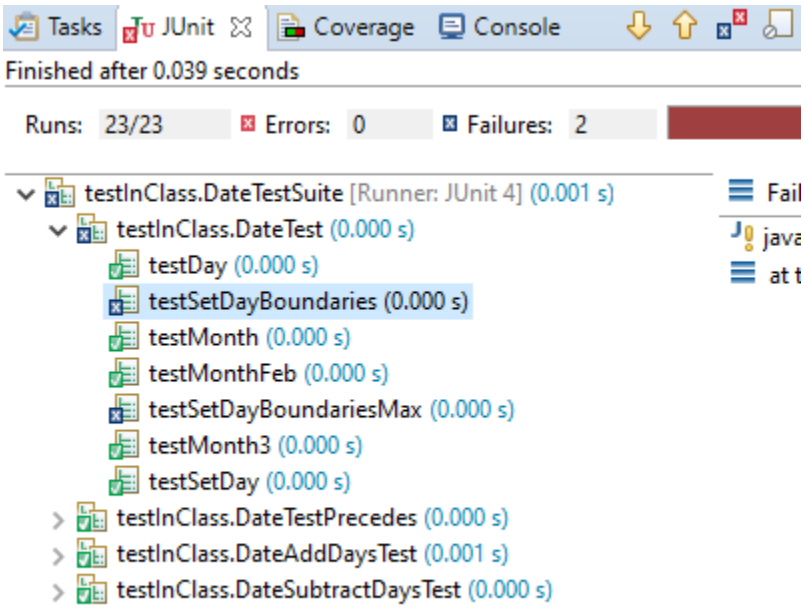
Step 5:

```
    public void setDay(int day)
    {
        if ((day <= 0) || (day > 31))
        {
            System.out.println("Fatal Error");
            //System.exit(0);
        }
        else
            this.day = day;
    }
```

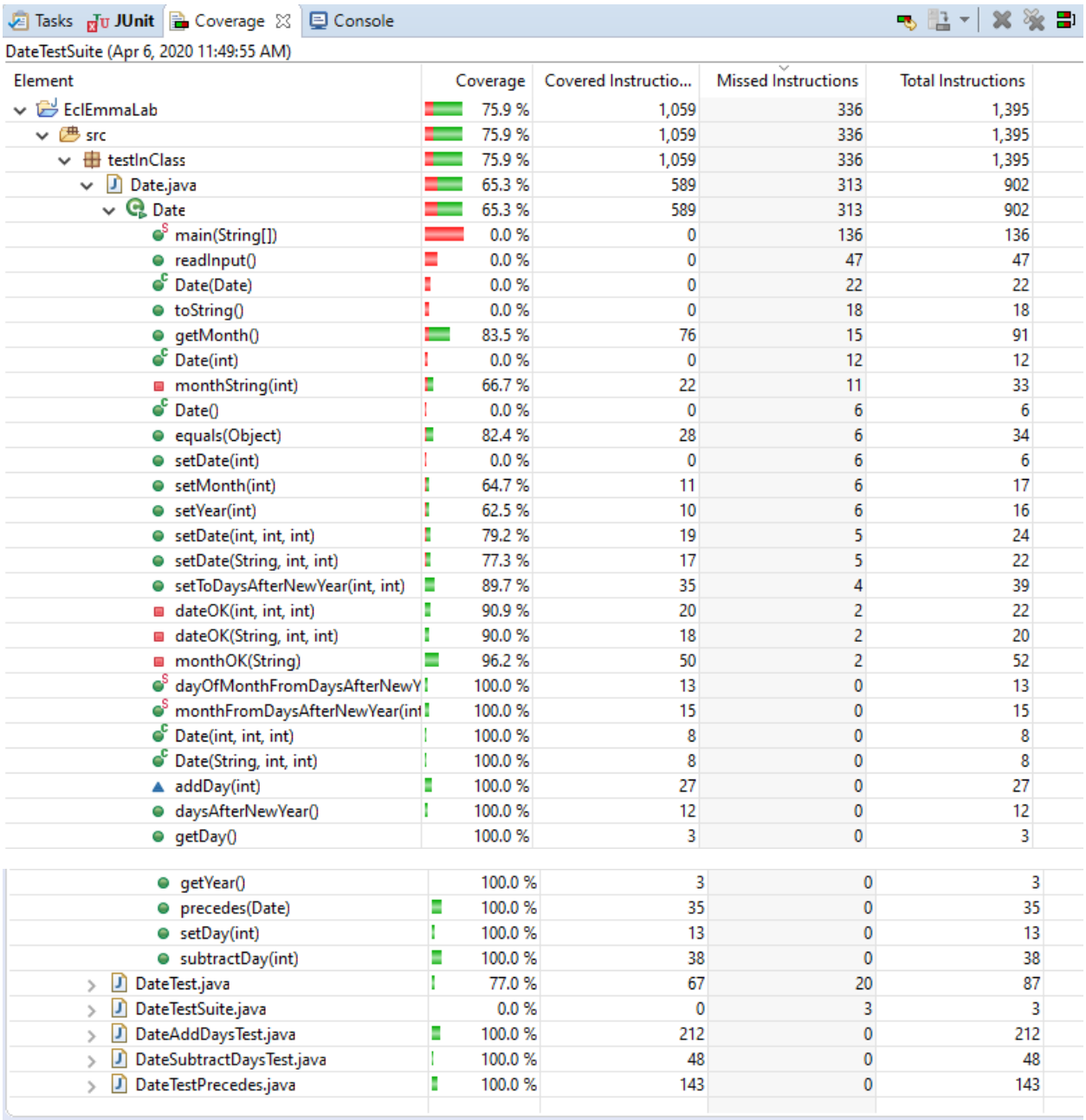
Step 6:

```
    public Date subtractDay(int  numDays) {
        int newDaysAfterNewYear = daysAfterNewYear()-numDays;

        if (newDaysAfterNewYear < 0) {
            int yearsBack = -(-1 + (newDaysAfterNewYear + 1)/DAYS_PER_YEAR);
            setYear(getYear()-yearsBack);

            newDaysAfterNewYear += (DAYS_PER_YEAR * yearsBack);
        }

        setMonth(monthFromDaysAfterNewYear(newDaysAfterNewYear));
        setDay(dayOfMonthFromDaysAfterNewYear(newDaysAfterNewYear));

        return this;

    }
}
```

Step 7:


Tasks
JUnit
Coverage
Console
Finished after 0.039 seconds
Runs: 23/23
Errors: 0
Failures: 2
testInClass.DateTestSuite [Runner: JUnit 4] (0.001 s)
testInClass.DateTest (0.000 s)
testDay (0.000 s)
testSetDayBoundaries (0.000 s)
testMonth (0.000 s)
testMonthFeb (0.000 s)
testSetDayBoundariesMax (0.000 s)
testMonth3 (0.000 s)
testSetDay (0.000 s)
testInClass.DateTestPrecedes (0.000 s)
testInClass.DateAddDaysTest (0.001 s)
testInClass.DateSubtractDaysTest (0.000 s)
Fail
java
at t

Step 8:



Element	Coverage	Covered Instructio...	Missed Instructions	Total Instructions
EclEmmaLab	75.9 %	1,059	336	1,395
src	75.9 %	1,059	336	1,395
testInClass	75.9 %	1,059	336	1,395
Date.java	65.3 %	589	313	902
Date	65.3 %	589	313	902
main(String[])	0.0 %	0	136	136
readInput()	0.0 %	0	47	47
Date(Date)	0.0 %	0	22	22
toString()	0.0 %	0	18	18
getMonth()	83.5 %	76	15	91
Date(int)	0.0 %	0	12	12
monthString(int)	66.7 %	22	11	33
Date()	0.0 %	0	6	6
equals(Object)	82.4 %	28	6	34
setDate(int)	0.0 %	0	6	6
setMonth(int)	64.7 %	11	6	17
setYear(int)	62.5 %	10	6	16
setDate(int, int, int)	79.2 %	19	5	24
setDate(String, int, int)	77.3 %	17	5	22
setToDaysAfterNewYear(int, int)	89.7 %	35	4	39
dateOK(int, int, int)	90.9 %	20	2	22
dateOK(String, int, int)	90.0 %	18	2	20
monthOK(String)	96.2 %	50	2	52
dayOfMonthFromDaysAfterNewY	100.0 %	13	0	13
monthFromDaysAfterNewYear(int	100.0 %	15	0	15
Date(int, int, int)	100.0 %	8	0	8
Date(String, int, int)	100.0 %	8	0	8
addDay(int)	100.0 %	27	0	27
daysAfterNewYear()	100.0 %	12	0	12
getDay()	100.0 %	3	0	3
getYear()	100.0 %	3	0	3
precedes(Date)	100.0 %	35	0	35
setDay(int)	100.0 %	13	0	13
subtractDay(int)	100.0 %	38	0	38
DateTest.java	77.0 %	67	20	87
DateTestSuite.java	0.0 %	0	3	3
DateAddDaysTest.java	100.0 %	212	0	212
DateSubtractDaysTest.java	100.0 %	48	0	48
DateTestPrecedes.java	100.0 %	143	0	143