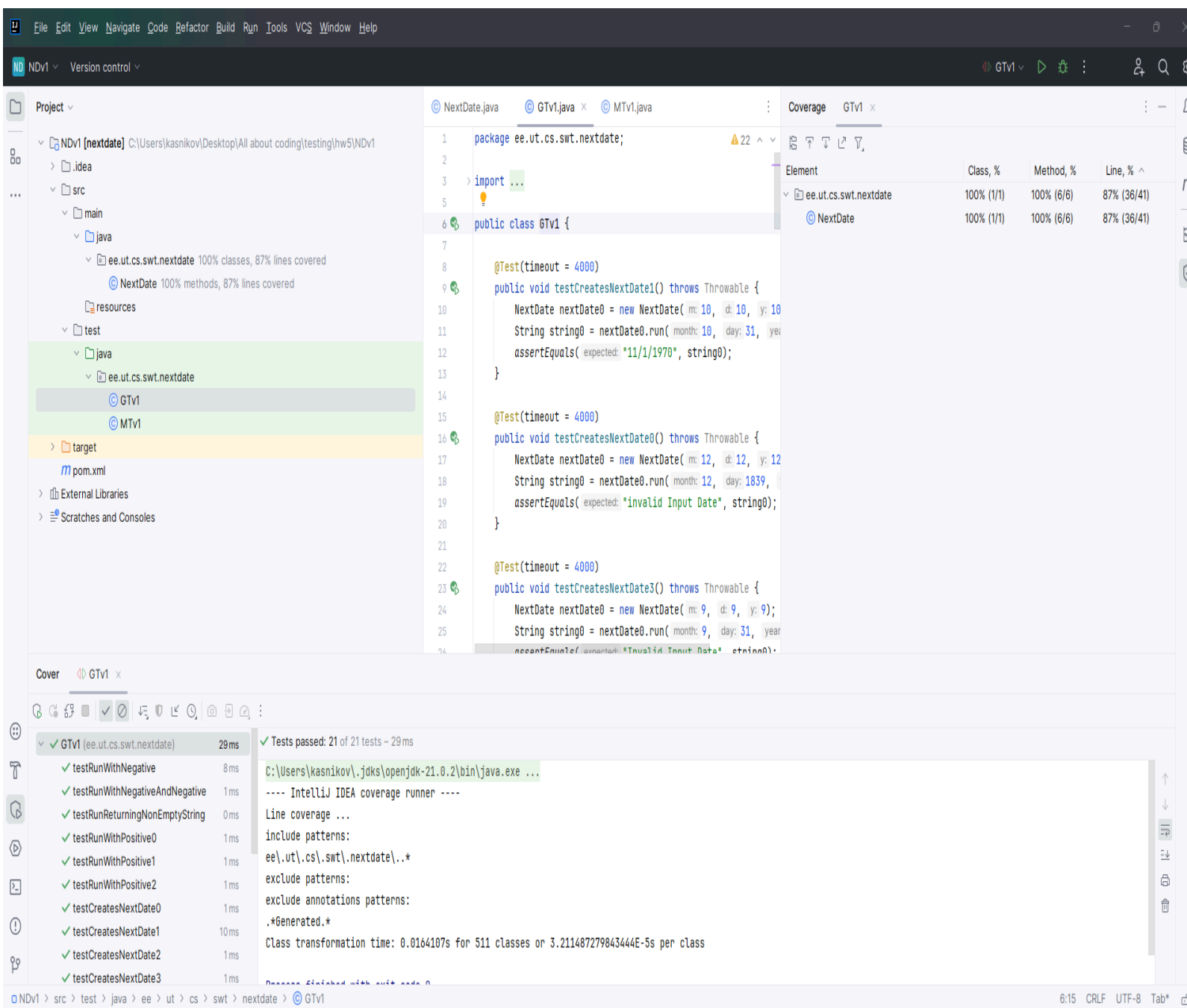


GTv1 screenshot



MTv1 screenshot

The screenshot displays the IntelliJ IDEA IDE interface. The top menu bar includes File, Edit, View, Navigate, Code, Refactor, Build, Run, Tools, VCS, Window, and Help. The toolbar shows icons for running tests and viewing coverage.

The **Project** view on the left shows the project structure:

- NDv1 [nextdate] C:\Users\kasnikov\Desktop\All about coding\testing\hw5\NDv1
 - .idea
 - src
 - main
 - java
 - ee.ut.cs.swt.nextdate 100% classes, 65% lines covered
 - NextDate 100% methods, 65% lines covered
 - test
 - java
 - ee.ut.cs.swt.nextdate
 - GTv1
 - MTv1
 - target
 - pom.xml
 - External Libraries
 - Scratches and Consoles

The **Code** view in the center shows the `NextDate.java` file with the following code:

```
1 package ee.ut.cs.swt.nextdate;
2
3 import ...
4
5
6 public class GTv1 {
7
8     @Test(timeout = 4000)
9     public void testCreatesNextDate1() throws Throwable {
10         NextDate nextDate0 = new NextDate(m: 10, d: 10, y: 10);
11         String string0 = nextDate0.run(month: 10, day: 31, year: 1970);
12         assertEquals(expected: "11/1/1970", string0);
13     }
14
15     @Test(timeout = 4000)
16     public void testCreatesNextDate0() throws Throwable {
17         NextDate nextDate0 = new NextDate(m: 12, d: 12, y: 12);
18         String string0 = nextDate0.run(month: 12, day: 1839, year: 1970);
19         assertEquals(expected: "invalid Input Date", string0);
20     }
21
22     @Test(timeout = 4000)
23     public void testCreatesNextDate3() throws Throwable {
24         NextDate nextDate0 = new NextDate(m: 9, d: 9, y: 9);
25         String string0 = nextDate0.run(month: 9, day: 31, year: 1970);
26         assertEquals(expected: "invalid Input Date", string0);
27     }
28 }
```

The **Coverage** view on the right shows the following data:

Element	Class, %	Method, %	Line, %
ee.ut.cs.swt.nextdate	100% (1/1)	100% (6/6)	65% (27/41)
NextDate	100% (1/1)	100% (6/6)	65% (27/41)

The **Run** view at the bottom shows the test results for `MTv1`:

- MTv1 (ee.ut.cs.swt.nextdate) 21 ms
- testDecemberToJanuary 20 ms
- testLeapYear 1 ms
- testJuneToJuly 0 ms
- testMarchToApril 0 ms

The console output shows the following messages:

```
C:\Users\kasnikov\.jdk\openjdk-21.0.2\bin\java.exe ...
---- IntelliJ IDEA coverage runner ----
Line coverage ...
include patterns:
ee\ut\cs\swt\nextdate\.*
exclude patterns:
exclude annotations patterns:
.*Generated.*

org.junit.ComparisonFailure:
Expected: "invalid Input Date"
Actual: "11/1/1970"
```

Task 2, screenshots

GTv1

The screenshot displays the IntelliJ IDEA IDE interface with the following components:

- Project View:** Shows the project structure with the following hierarchy:
 - ee.ut.cs.swt.nextdate (100% classes, 81% lines covered)
 - NextDate (100% methods, 81% lines covered)
 - resources
 - test
 - java
 - ee.ut.cs.swt.nextdate
 - GTv1 (selected)
 - GTv12
 - MTv1
 - target

- Structure View:** Shows the class structure for GTv1 with the following methods:
- testCreatesNextDate1(): void
- testCreatesNextDate0(): void
- testCreatesNextDate3(): void
- testCreatesNextDate2(): void
- testCreatesNextDate5(): void
- testCreatesNextDate4(): void
- testRunReturningNonEmptyString(): void
- testRunWithNegative(): void
- testRunWithNegativeAndNegative(): void
- Code Editor:** Displays the code for GTv1, showing the `testCreatesNextDate7()` method. The code includes assertions for invalid input dates and a timeout of 4000ms.

```
102 String string0 = nextDate0.run( month: 1, day: 1, year: 1);
103 assertEquals( expected: "invalid Input Date", string0);
104 }
105
106 @Test(timeout = 4000)
107 public void testCreatesNextDate7() throws Throwable {
108     NextDate nextDate0 = new NextDate( m: 7, d: 7, y: 7);
109     String string0 = nextDate0.run( month: 7, day: 7, year: 7);
110     assertEquals( expected: "7/7/1938", string0);
111 }
112
113 @Test(timeout = 4000)
114 public void testCreatesNextDate6() throws Throwable {
115     NextDate nextDate0 = new NextDate( m: 12, d: 12, y: 12);
116     String string0 = nextDate0.run( month: 12, day: 12, year: 12);
117     assertEquals( expected: "12/13/1839", string0);
118 }
119
120 @Test(timeout = 4000)
121 public void testCreatesNextDate9() throws Throwable {
122     NextDate nextDate0 = new NextDate( m: 2, d: 2, y: 2);
123     String string0 = nextDate0.run( month: 2, day: 28, year: 2);
124     assertEquals( expected: "3/1/1879", string0);
125 }
```
- Coverage View:** Shows the coverage for GTv1, with the following table:

Element	Class, %	Method, %	Line, %
ee.ut.cs.swt.nextdate	100% (1/1)	100% (7/7)	81% (40/49)
NextDate	100% (1/1)	100% (7/7)	81% (40/49)
- Test Results:** Shows the test results for GTv1, with the following table:

Test Name	Duration
testRunWithNegative	8 ms
testRunWithNegativeAndNegative	1 ms
testRunReturningNonEmptyString	1 ms
testRunWithPositive0	1 ms
testRunWithPositive1	0 ms
testRunWithPositive2	0 ms
testCreatesNextDate0	0 ms
testCreatesNextDate1	8 ms
testCreatesNextDate2	0 ms
testCreatesNextDate3	0 ms
- Output View:** Shows the output of the test runner, including the command used to run the tests and the coverage report.

```
C:\Users\kasnikov\.jdk\openjdk-21.0.2\bin\java.exe ...
---- IntelliJ IDEA coverage runner ----
Line coverage ...
include patterns:
ee\ut\cs\swt\nextdate\.*
exclude patterns:
exclude annotations patterns:
.*Generated.*
Class transformation time: 0.0175093s for 511 classes or 3.4264774951076315E-5s per class
OnProcess finished with exit code 0
```

GTv12

The screenshot displays the IntelliJ IDEA IDE interface. The top menu bar includes File, Edit, View, Navigate, Code, Refactor, Build, Run, Tools, VCS, Window, and Help. The toolbar shows icons for running and debugging. The main editor area is split into three panes:

- Project View:** Shows the project structure with folders for `ee.ut.cs.swt.nextdate`, `resources`, `test`, and `target`. The `test` folder contains `java` and `ee.ut.cs.swt.nextdate` subfolders. The `ee.ut.cs.swt.nextdate` folder contains `GTv1`, `GTv12`, and `MTv1` classes.
- Structure View:** Shows the class structure for `GTv12`, listing methods like `testCreatesNextDate1()`, `testCreatesNextDate0()`, `testCreatesNextDate3()`, `testCreatesNextDate2()`, `testCreatesNextDate5()`, `testCreatesNextDate4()`, `testRunWithNegative()`, `testCreatesNextDate14()`, and `testCreatesNextDate13()`.
- Code Editor:** Displays the source code for `GTv12.java`. The code includes package declarations, imports, and several test methods using `@Test` and `assertEquals`.

The **Coverage** pane on the right shows the coverage for `GTv12` and `NextDate`. The **Cover** pane at the bottom shows the test results for `GTv12`, indicating that 26 of 26 tests passed in 35 ms. The **Run** pane at the bottom shows the command used to run the tests: `C:\Users\kasnikov\.jdk\openjdk-21.0.2\bin\java.exe ...`.

MTv1

FileEditViewNavigateCodeRefactorBuildRunToolsVCSWindowHelp

NDv1Version control

Project

ee.ut.cs.swt.nextdate 100% classes, 65% lines covered

NextDate 100% methods, 65% lines covered

resources

test

java

ee.ut.cs.swt.nextdate

GTv1

GTv12

MTv1

target

Structure

MTv1

tearDownAfterClass(): void

testJuneToJuly(): void

testMarchToApril(): void

testDecemberToJanuary(): void

testLeapYear(): void

trialDate: NextDate = new NextDate(...)

NextDate.java

GTv12.java

GTv1.java

MTv1.java

Coverage MTv1

13

14

15

16

17

18

19

20

21

24

25

26

29

30

31

32

33

34

37

38

//@Test

/*

* Test method for 'ee.ut.cs.swt.nextdate.NextDate.run(int

*/

@Test

public final void testJuneToJuly() { assertEquals(expected:

@Test

public final void testMarchToApril() { assertEquals(expecte

@Test

public final void testDecemberToJanuary() { assertEquals(e

@Test

public final void testLeapYear() { assertEquals(expected: "

}

Element

Class, %

Method, %

Line, % ^

ee.ut.cs.swt.nextdate

NextDate

100% (1/1)

100% (7/7)

65% (32/49)

100% (1/1)

100% (7/7)

65% (32/49)

Cover

MTv1

MTv1 (ee.ut.cs.swt.nextdate) 12ms

testDecemberToJanuary 2ms

testLeapYear 10ms

testJuneToJuly 0ms

testMarchToApril 0ms

Tests passed: 4 of 4 tests - 12ms

C:\Users\kasnikov\.jdk\openjdk-21.0.2\bin\java.exe ...

---- IntelliJ IDEA coverage runner ----

Line coverage ...

include patterns:

ee\ut\cs\swt\nextdate\..*

exclude patterns:

exclude annotations patterns:

.*Generated.*

Class transformation time: 0.0132703s for 499 classes or 2.6593787575150303E-5s per class

Done:ace finished with exit code 0

NDv1src > test > java > ee > ut > cs > swt > nextdate > MTv1

38:1 CRLF UTF-8 Tab*