

Lesson 5

# TestNG Tutorial Selenium

# Webdriver Testcase Building

## Part 2: Annotations

Note and presentation: N.C. Danh  
Faculty of Software Engineering  
College of Information and Communication Technology  
Can Tho University  
22/03/2023

# Annotations

- Examples

- Link: <https://www.spicejet.com/>
- We can book: Flights, Hotels, and Holiday Packages



BOOK

ADD-ONS

VACATIONS

GIFT CARD

LOGIN / SIGNUP

MENU

Flights

Hotels

Holiday Packages

Flight Status

Check-In

Manage Booking

☒ Round Trip ☐ One Way

\*FROM

Departure City

\*TO

Arrival City

\*DEPART DATE

23/01

Tue, Jan 23 2018

RETURN DATE

30/01

Tue, Jan 30 2018

ADULT

1

CHILD

0

INFANT

0

CURRENCY

Select



SEARCH

☐ Unaccompanied Minor ☐ Family and Friends ☐ Student ☐ Indian Armed Forces ☐ Senior Citizen

For Special Assistance

SpiceJet's

GREAT REPUBLIC DAY SALE

FARES STARTING AT

₹769\*

For domestic

₹2469\*

For international

ALL-INCLUSIVE

SALE PERIOD: 22<sup>ND</sup> - 25<sup>TH</sup> JAN., 2018

TRAVEL PERIOD: TILL 12<sup>TH</sup> DEC., 2018

10% OFF\* AND FREE  
PRIORITY CHECK-IN.

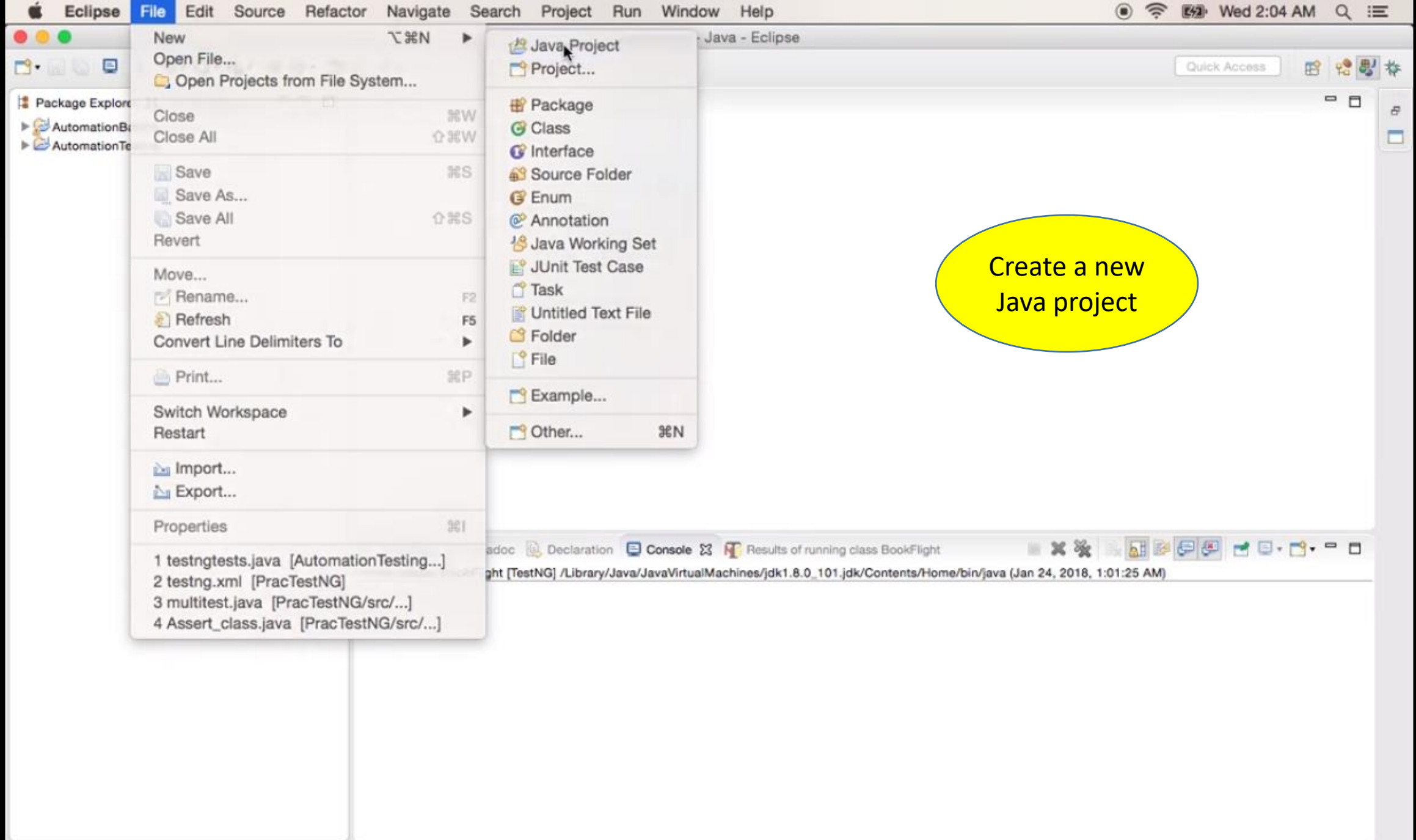
GET 20% OFF\* AND ₹500\*  
CROMA VOUCHER

ON PRE-BOOKING A MEAL,  
SEAT OR SPICEMAX.

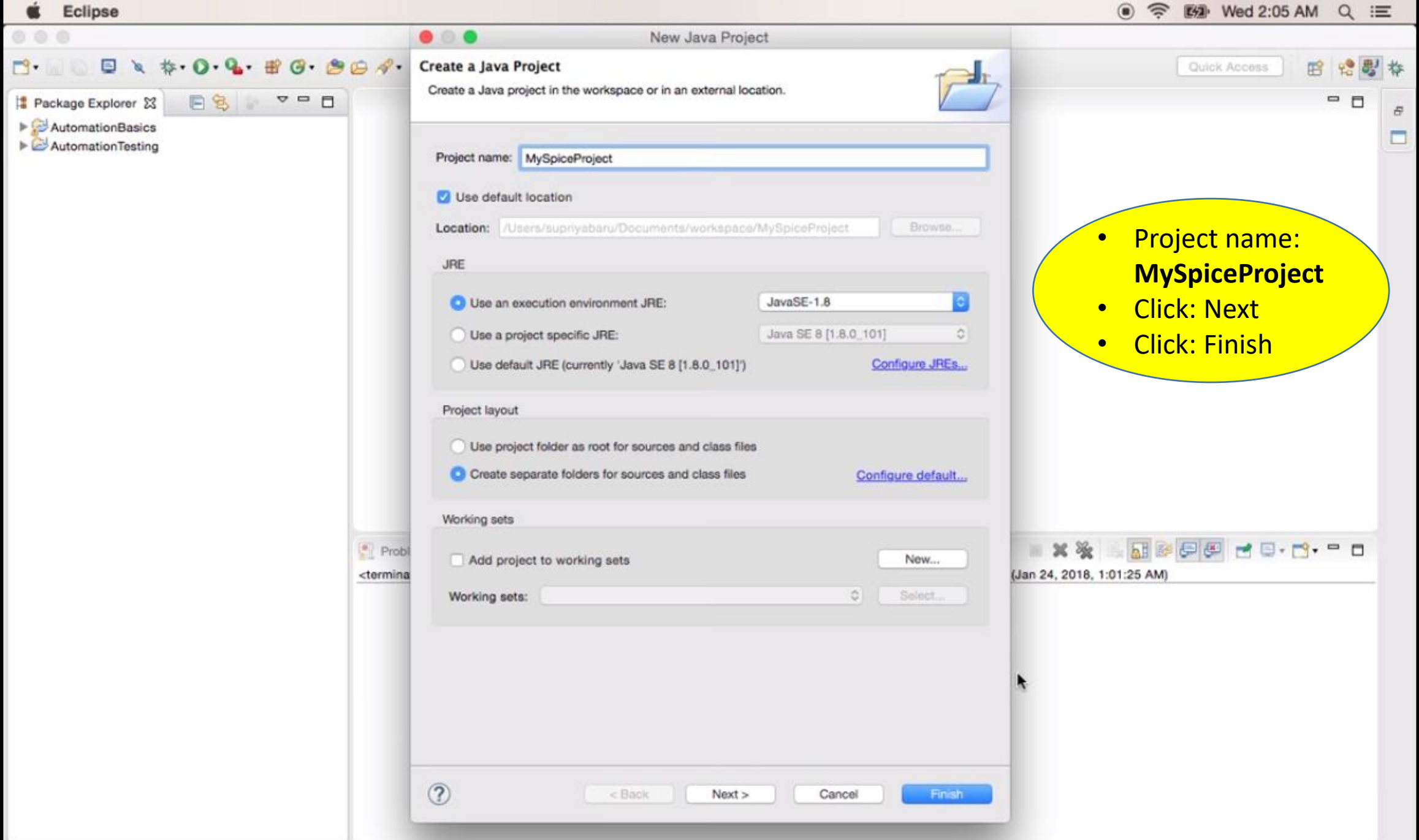
croma

# We need to structure the testing

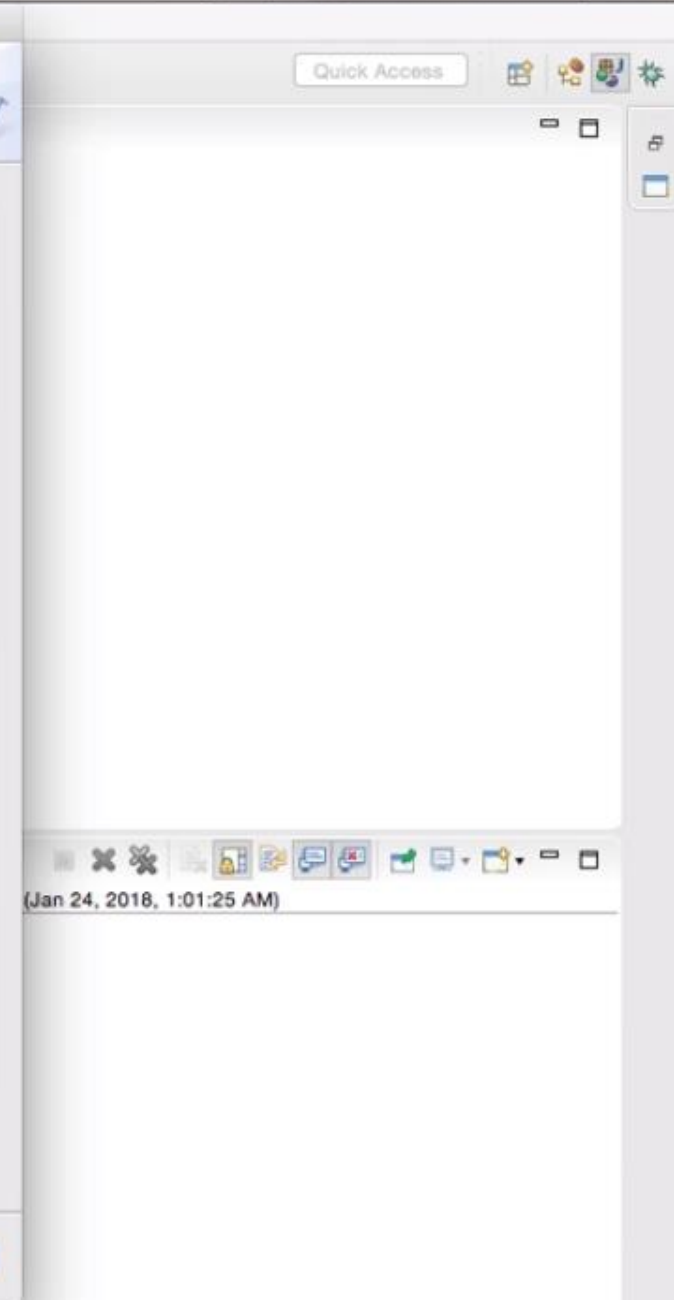
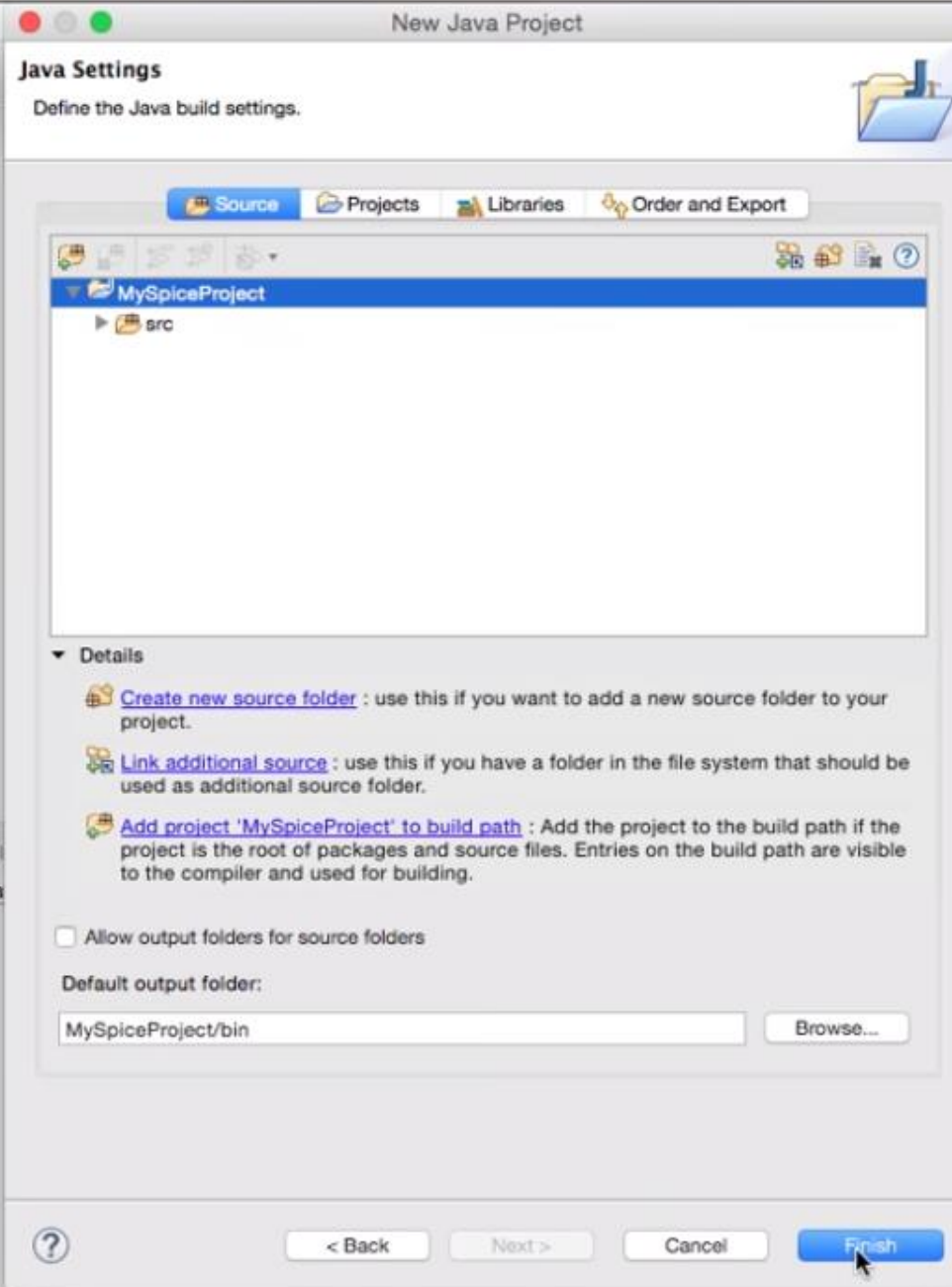
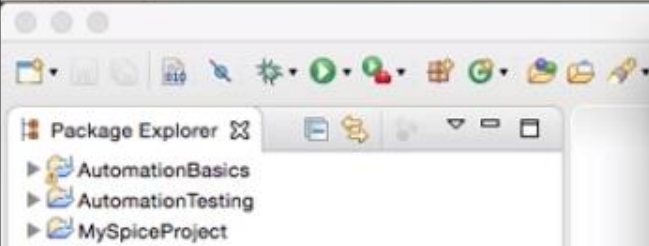
- To test Book, we can create some following packages:
  - Flights
  - Hotels
  - Holiday Packages
- Thus, creating packages can reply on functionalities of the system



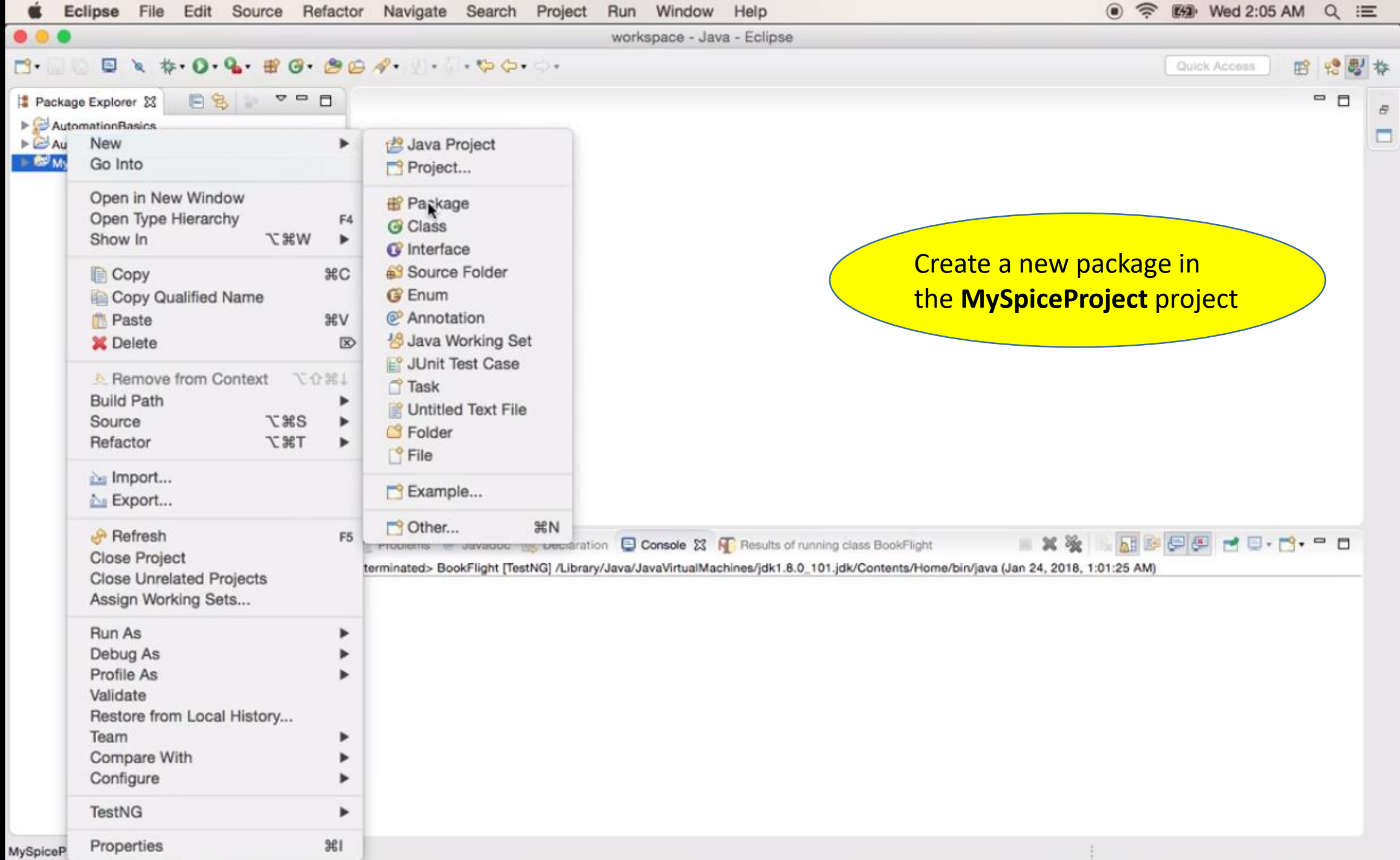
Create a new  
Java project



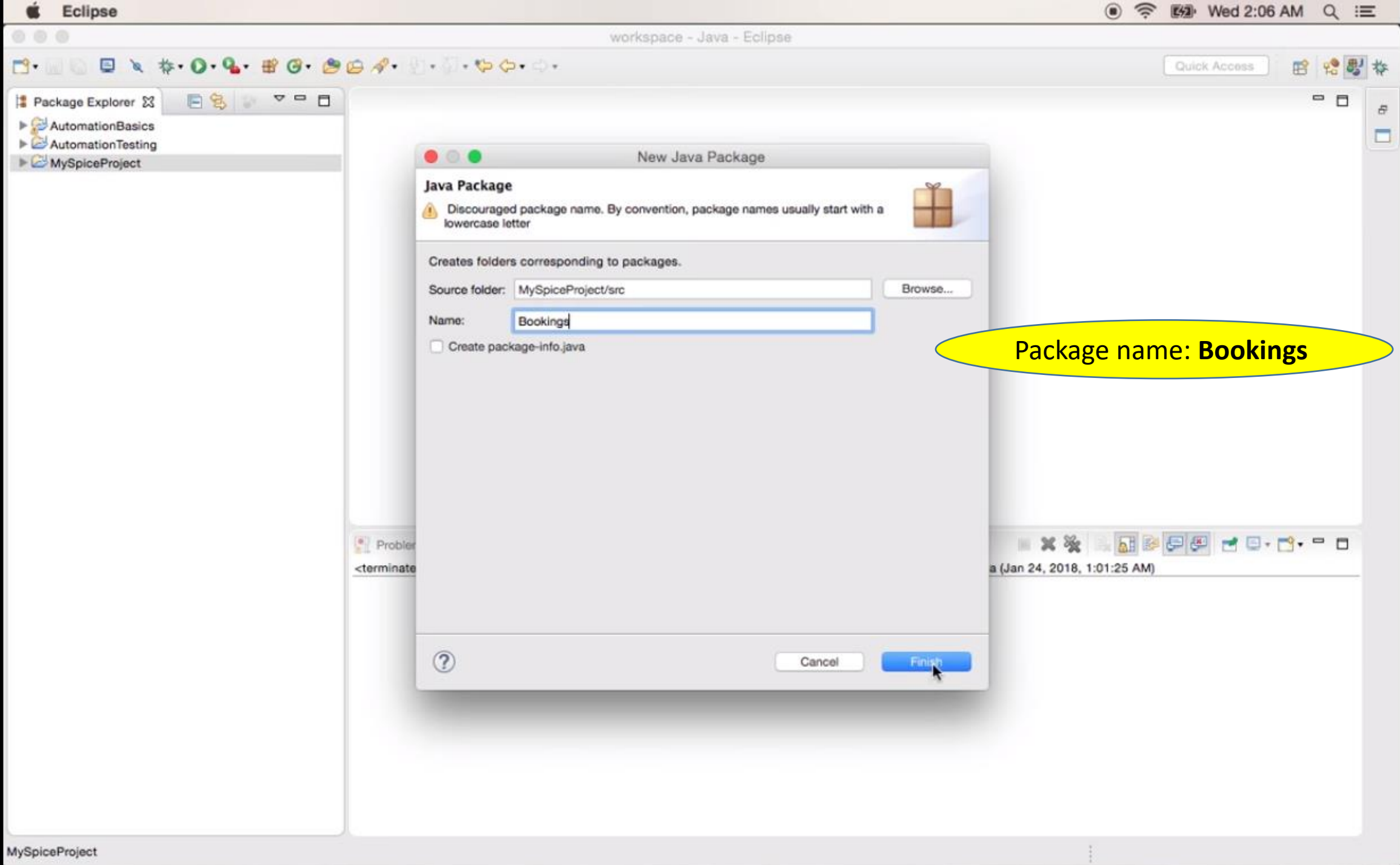
- Project name: **MySpiceProject**
- Click: Next
- Click: Finish

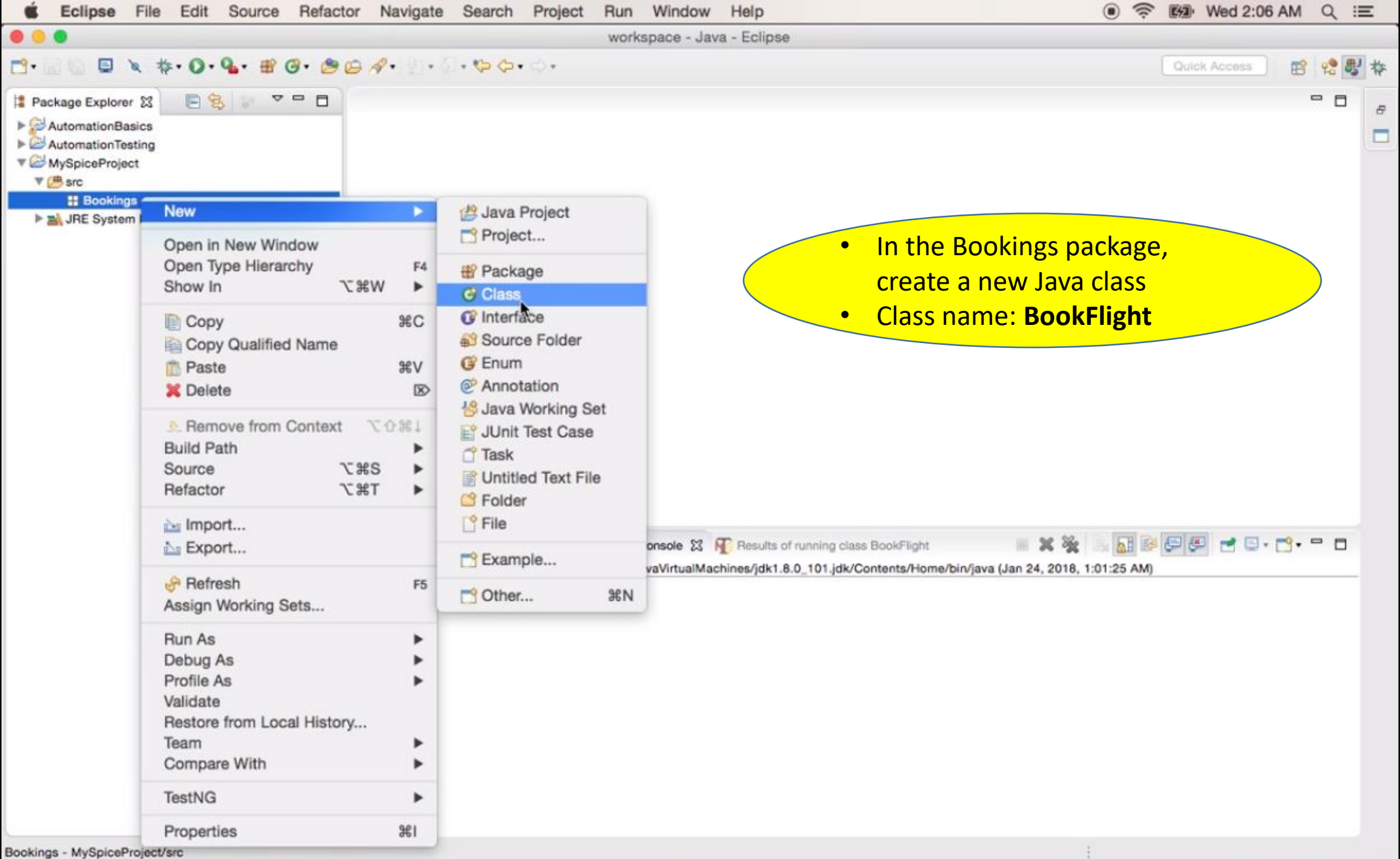












## Package Explorer

- AutomationBasics
- AutomationTesting
- MySpiceProject
  - src
    - Bookings
  - JRE System Library [JavaSE-1.8]

## Java Class

This package name is discouraged. By convention, package names usually start with a lowercase letter

Source folder: MySpiceProject/src Browse...

Package: Bookings Browse...

☐ Enclosing type: Browse...

Name: BookFlight

Modifiers: ☒ public ☐ package ☐ private ☐ protected

☐ abstract ☐ final ☐ static

Superclass: java.lang.Object Browse...

Interfaces: Add...

Remove

Which method stubs would you like to create?

☐ public static void main(String[] args)

☐ Constructors from superclass

☒ Inherited abstract methods

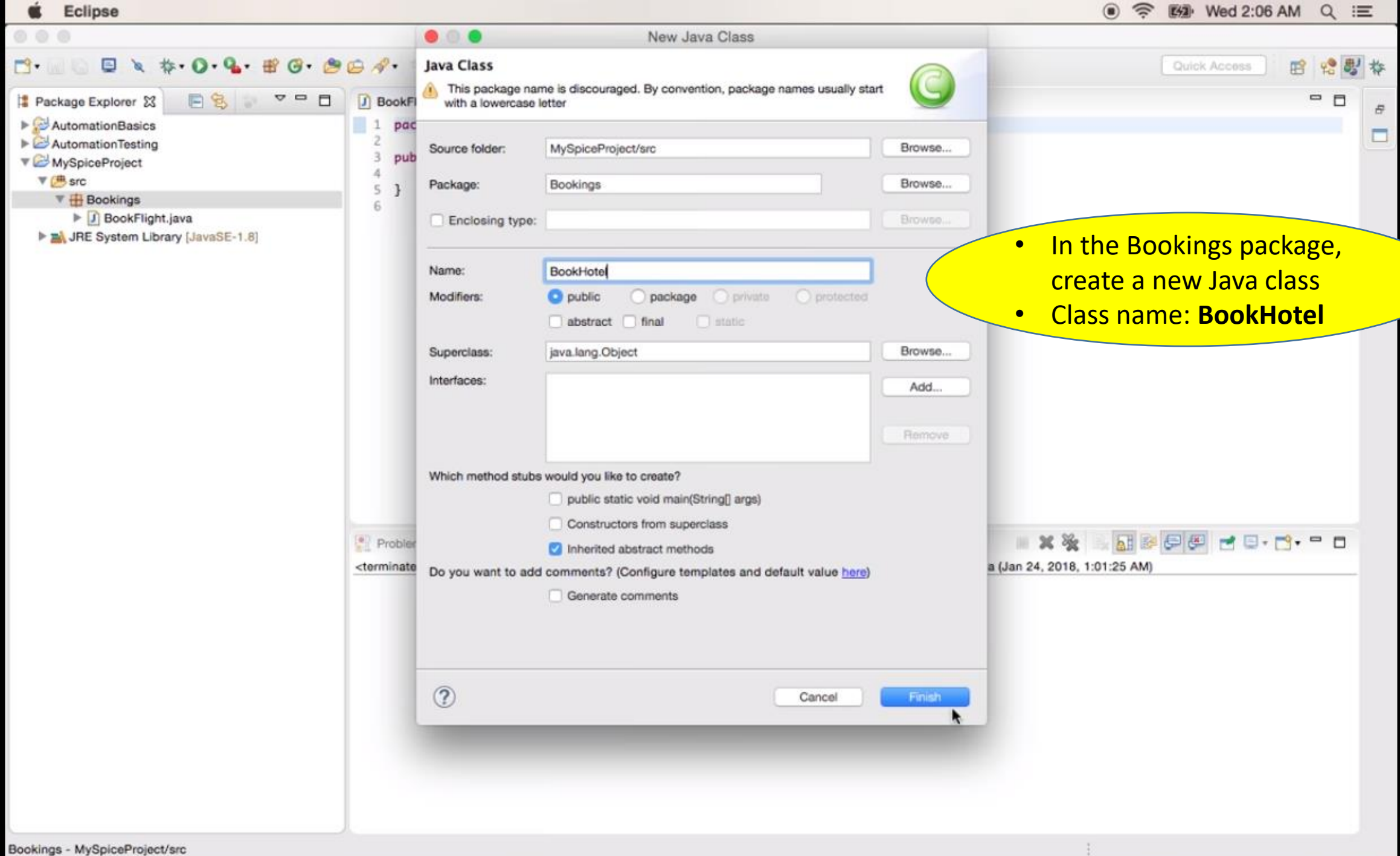
Do you want to add comments? (Configure templates and default value [here](#))

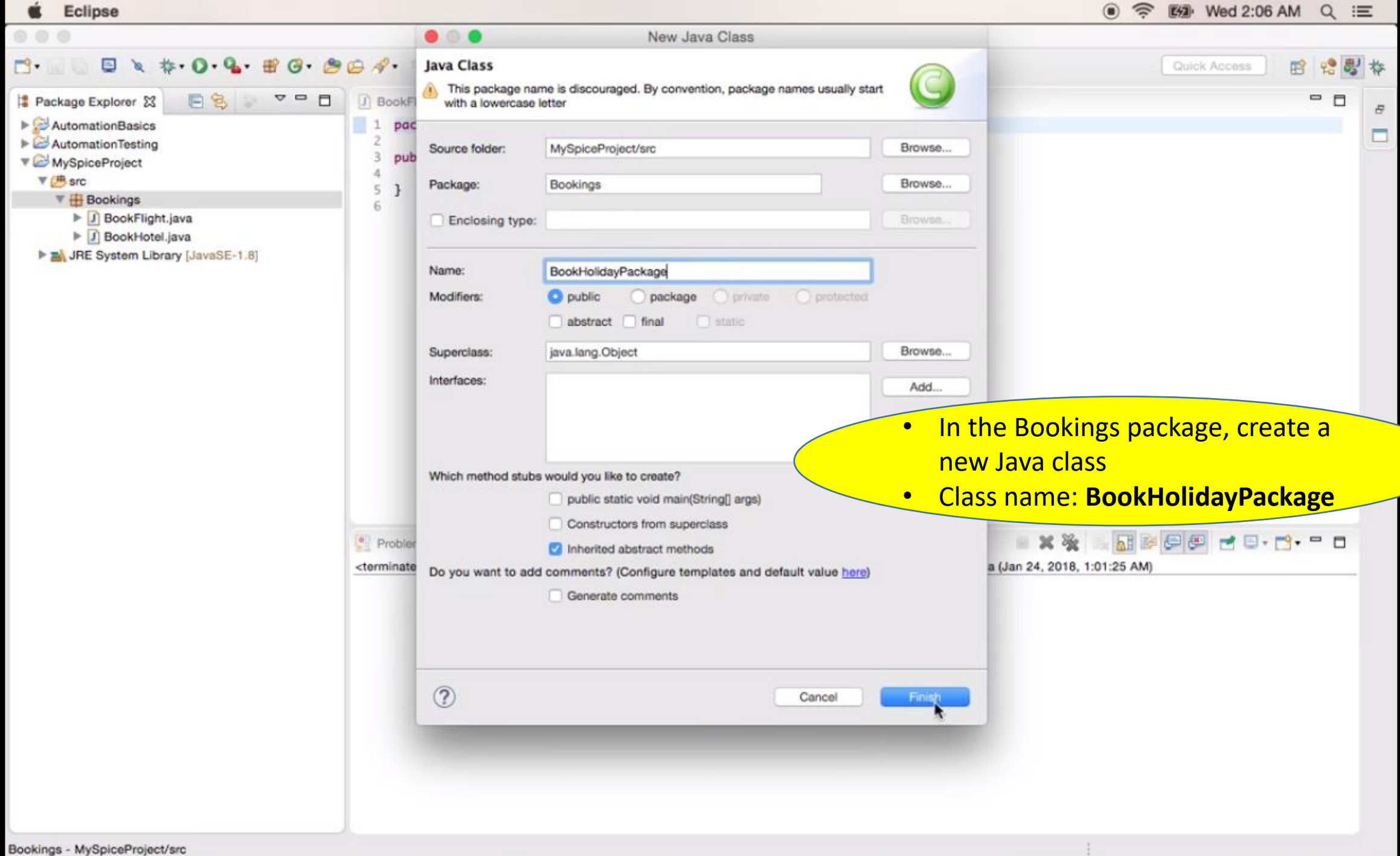
☐ Generate comments



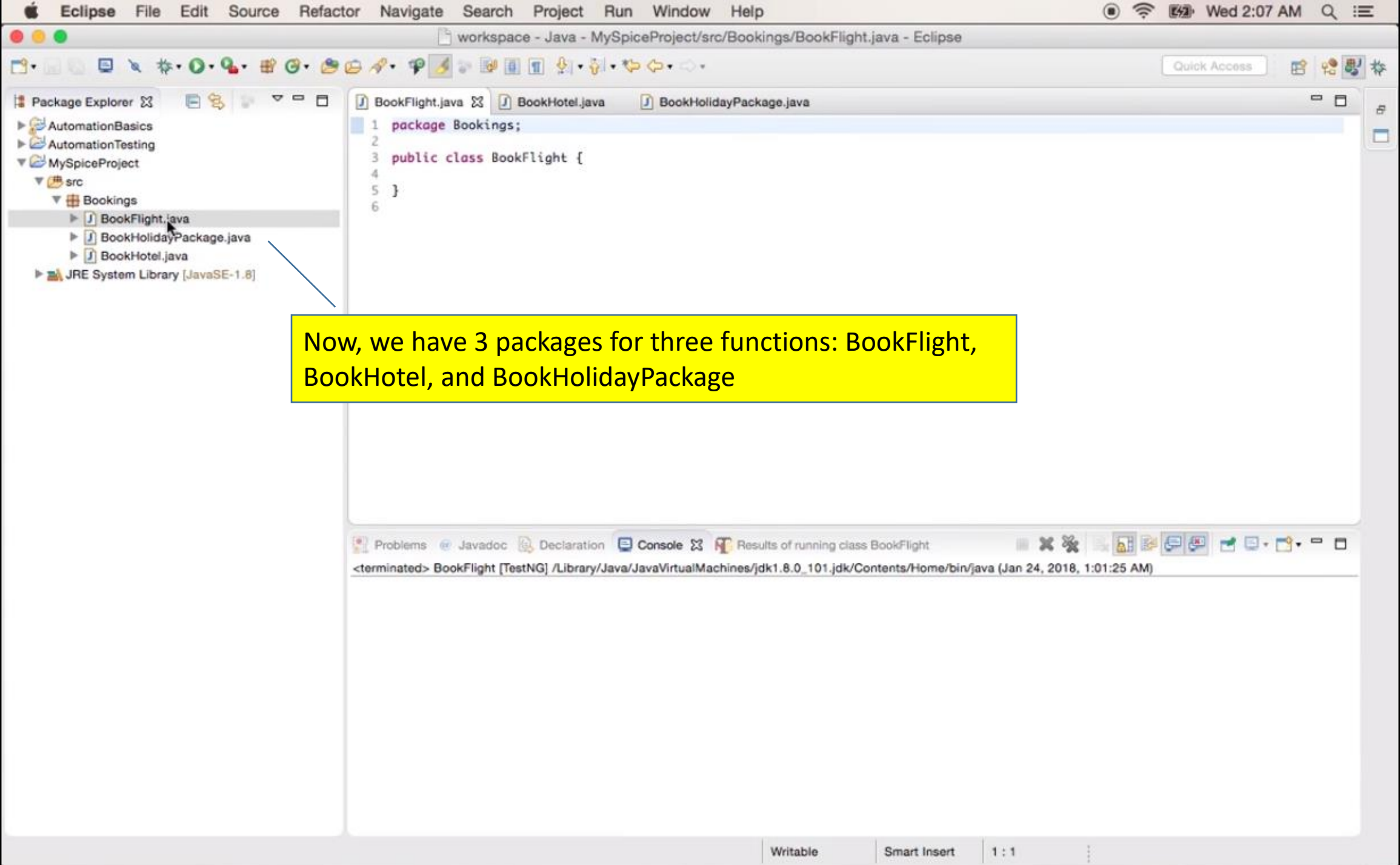
Cancel

Finish



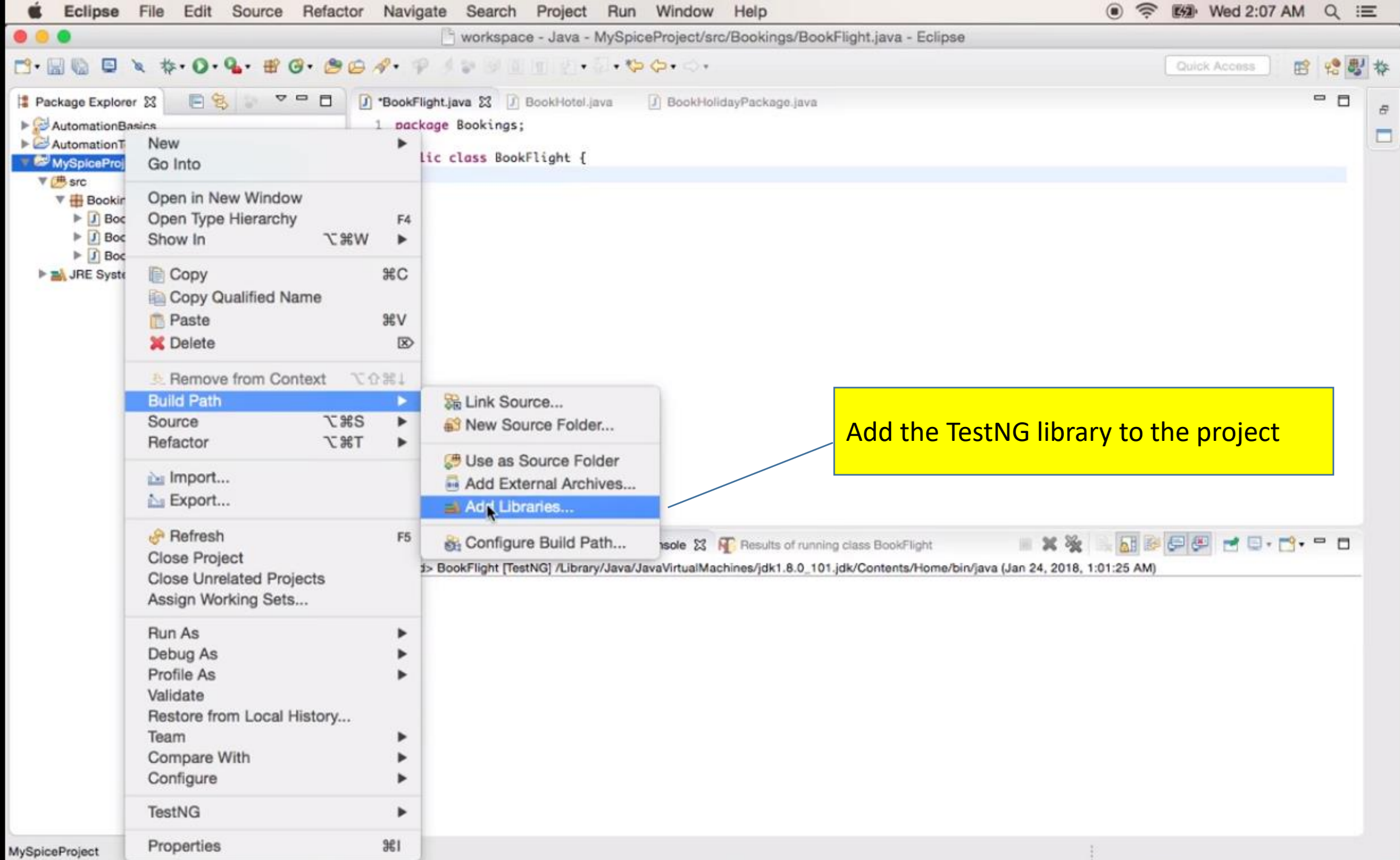


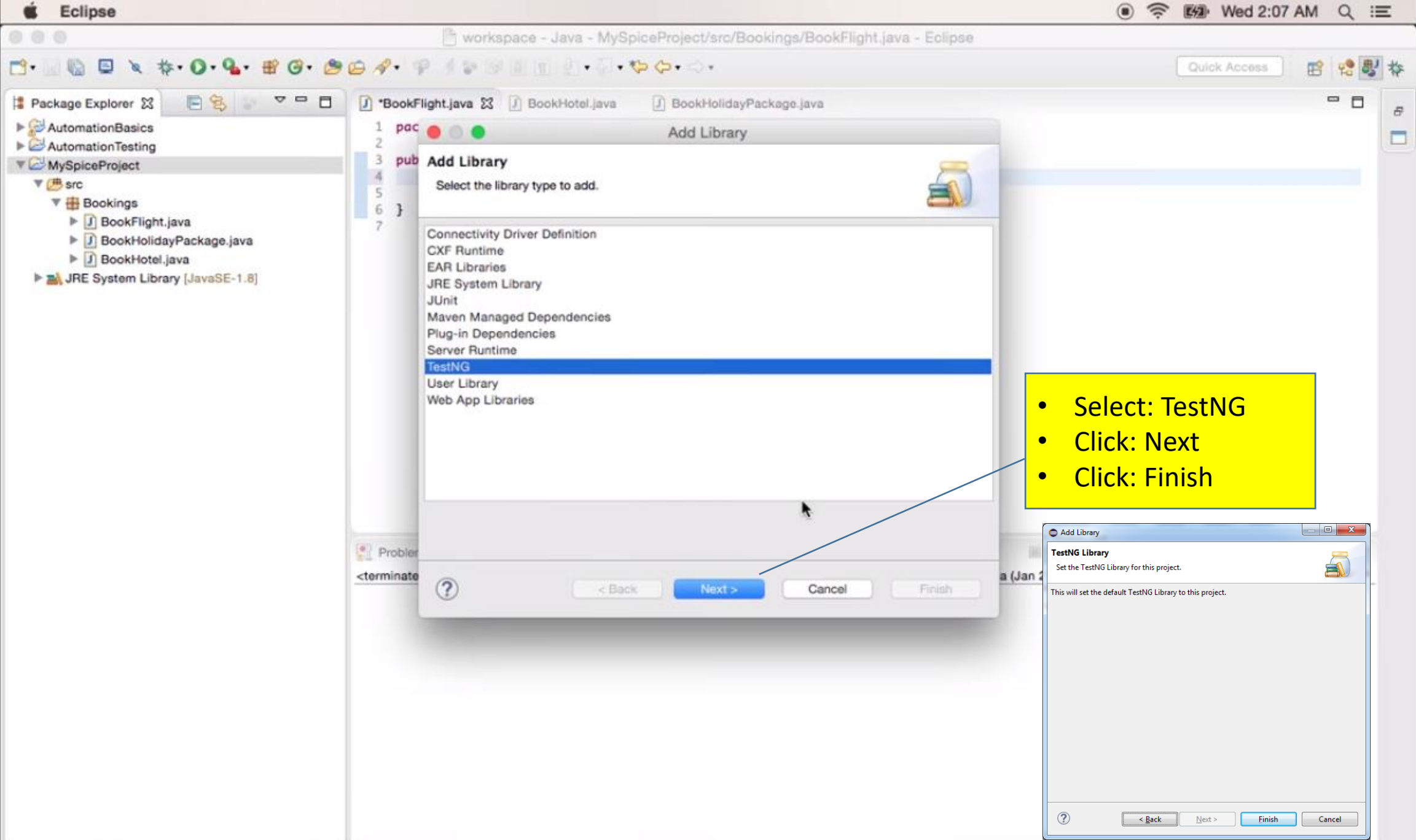




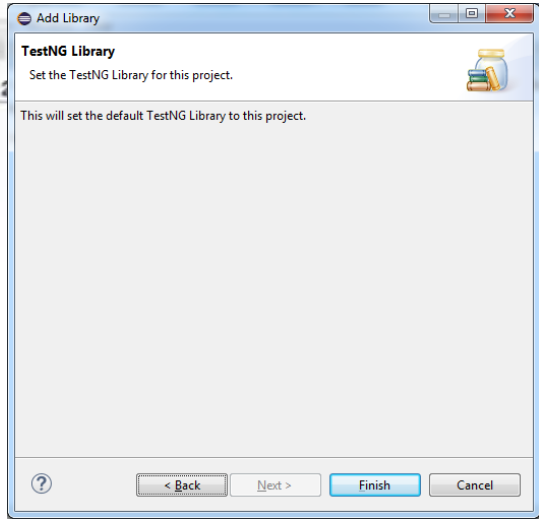


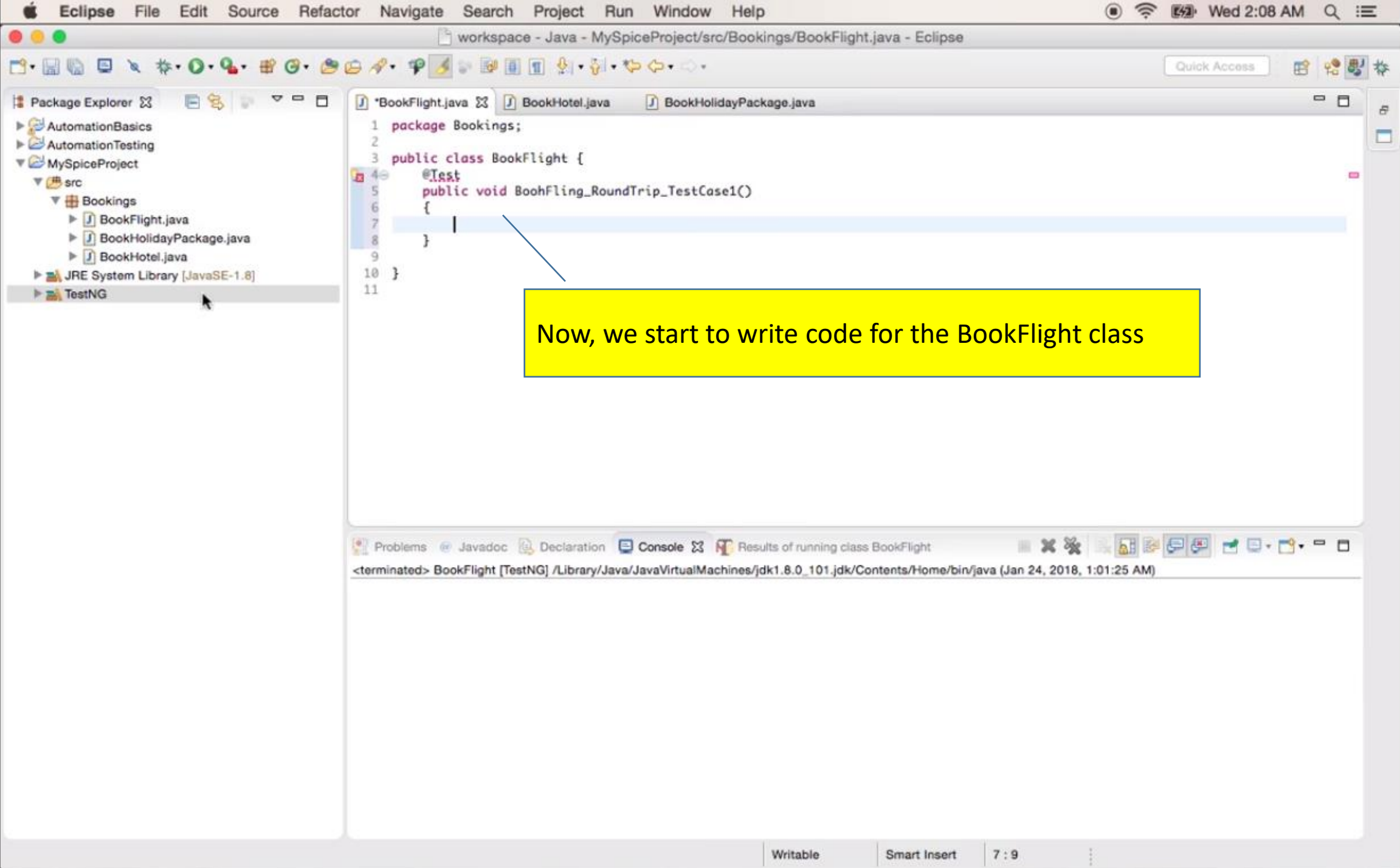
- Now we start to write code for classes
- At first, we need to add the TestNG library to the project






- Select: TestNG
- Click: Next
- Click: Finish







BOOK


ADD-ONS


VACATIONS


GIFT CARD


LOGIN / SIGNUP


MENU


 **Flights**

 Hotels

 Holiday Packages

 Flight Status

 Check-In

 Manage Booking

Round Trip

One Way

FROM

Departure City

TO

Arrival City

DEPART DATE

23/01

Tue, Jan 23 2018

RETURN DATE

30/01

Tue, Jan 30 2018

ADULT

1

CHILD


0

INFANT

0

CURRENCY

Select



SEARCH


☐ Unaccompanied Minor

☐ Family and Friends

☐ Student

☐ Indian Armed Forces

☐ Senior Citizen

 For Special Assistance

BookFlight has:

- RoundTrip
- One Way



# GREAT REPUBLIC DAY SALE

FARES STARTING AT

₹769\*

₹2469\*

For domestic

For international

ALL-INCLUSIVE

SALE PERIOD: 22<sup>ND</sup> - 25<sup>TH</sup> JAN., 2018

TRAVEL PERIOD: TILL 12<sup>TH</sup> DEC., 2018

10% OFF\* AND FREE PRIORITY CHECK-IN.

SBI Card

PROMO CODE: SPICSALE

GET 20% OFF\* AND ₹500\* CROMA VOUCHER ON PRE-BOOKING A MEAL, PREFERRED SEAT OR SPICEMAX.

croma



BOOK NOW



Package Explorer

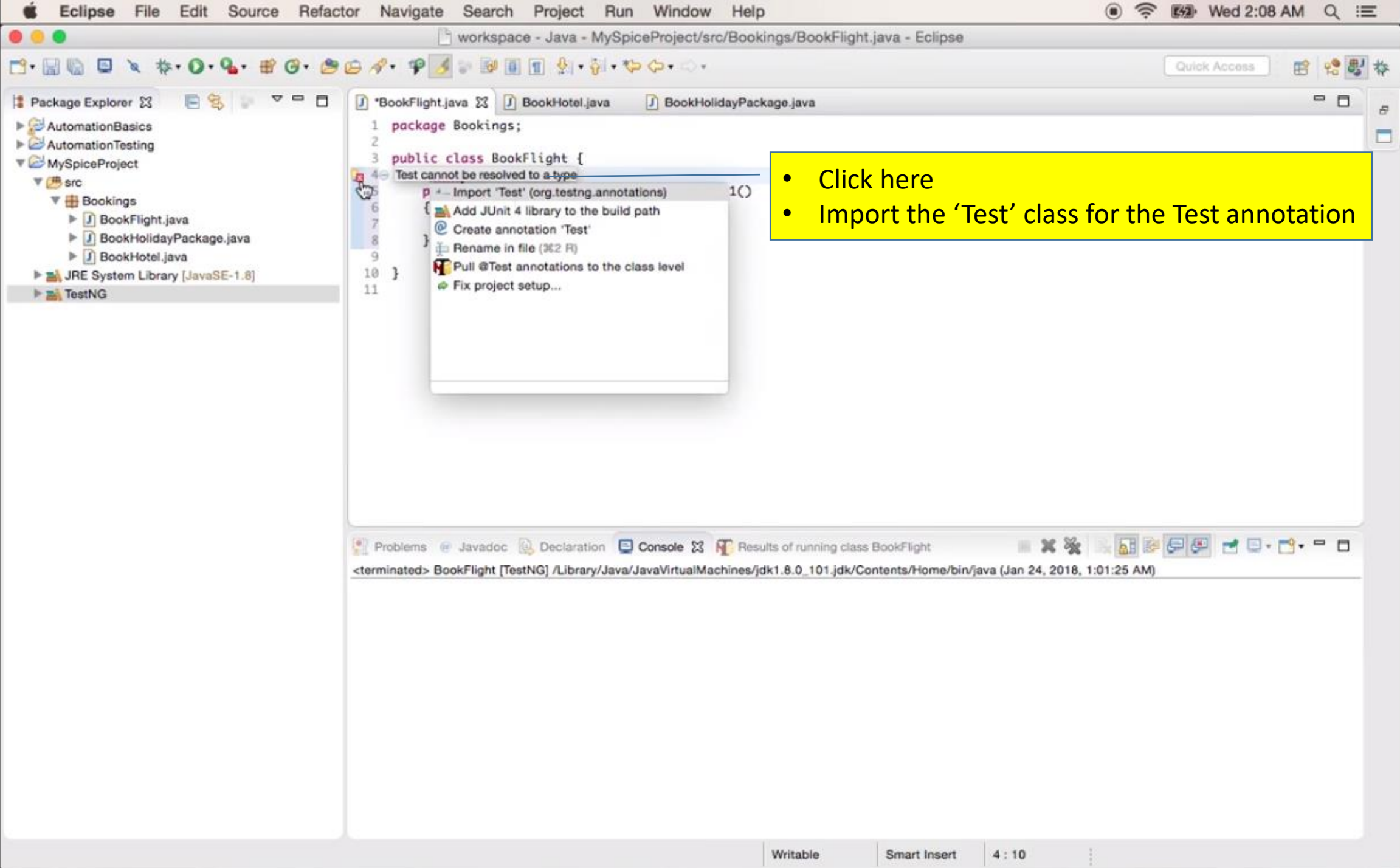
- AutomationBasics
- AutomationTesting
- MySpiceProject
  - src
    - Bookings
      - BookFlight.java
      - BookHolidayPackage.java
      - BookHotel.java
  - JRE System Library [JavaSE-1.8]
  - TestNG

```
*BookFlight.java BookHotel.java BookHolidayPackage.java
1 package Bookings;
2
3 import org.testng.annotations.Test;
4
5 public class BookFlight {
6     @Test
7     public void BookFlight_RoundTrip_TestCase1()
8     {
9
10    }
11
12 }
13
```

- Create a test case for RoundTrip
- Create a test case for One Way

<terminated> BookFlight [TestNG] /Library/Java/JavaVirtualMachines/jdk1.8.0\_101.jdk/Contents/Home/bin/java (Jan 24, 2018, 1:01:25 AM)





- Click here
- Import the 'Test' class for the Test annotation

☒ Round Trip ☐ One Way

\*FROM

Departure City

\*TO

Arrival City

\*DEPART DATE

23/01

Tue, Jan 23 2018

RETURN DATE

30/01

Tue, Jan 30 2018

ADULT

1

CHILD

0

INFANT

0

CURRENCY

Select



SEARCH

☐ Unaccompanied Minor ☐ Family and Friends ☐ Student ☐ Indian Armed Forces ☐ Senior Citizen

 For Special Assistance

SpiceJet's

**GREAT REPUBLIC DAY SALE**

FARES STARTING AT

₹769\*

For domestic

₹2469\*

For international

ALL-INCLUSIVE

SALE PERIOD: 22<sup>ND</sup> - 25<sup>TH</sup> JAN., 2018

TRAVEL PERIOD: TILL 12<sup>TH</sup> DEC., 2018

10% OFF\* AND FREE  
PRIORITY CHECK-IN.

SBI Card

PROMO CODE:

GET 20% OFF\* AND ₹500\*  
CROMA VOUCHER  
ON PRE-BOOKING A MEAL,  
PREFERRED SEAT OR SPICEMAX.

croma

BOOK NOW



workspace - Java - MySpiceProject/src/Bookings/BookFlight.java - Eclipse



Quick Access



Package Explorer

- AutomationBasics
- AutomationTesting
- MySpiceProject
  - src
    - Bookings
      - BookFlight.java
      - BookHolidayPackage.java
      - BookHotel.java
  - JRE System Library [JavaSE-1.8]
  - TestNG

\*BookFlight.java BookHotel.java BookHolidayPackage.java

```
1 package bookings;
2
3 import org.testng.annotations.Test;
4
5 public class BookFlight {
6     @Test
7     public void BookFlight_RoundTrip_TestCase1()
8     {
9
10    }
11    @Test
12    public void BookFlight_RoundTrip_TestCase2()
13    {
14
15    }
16    @Test
17    public void BookFlight_OneWay_TestCase3()
18    {
19
20    }
21    @Test
22    public void BookFlight_OneWay_TestCase4()
23    {
24
25    }
```

Problems Javadoc Declaration Console Results of running class BookFlight

&lt;terminated&gt; BookFlight [TestNG] /Library/Java/JavaVirtualMachines/jdk1.8.0\_101.jdk/Contents/Home/bin/java (Jan 24, 2018, 1:01:25 AM)

workspace - Java - MySpiceProject/src/Bookings/BookFlight.java - Eclipse



Quick Access



Package Explorer

- AutomationBasics
- AutomationTesting
- MySpiceProject
  - src
    - Bookings
      - BookFlight.java
      - BookHolidayPackage.java
      - BookHotel.java
  - JRE System Library [JavaSE-1.8]
  - TestNG

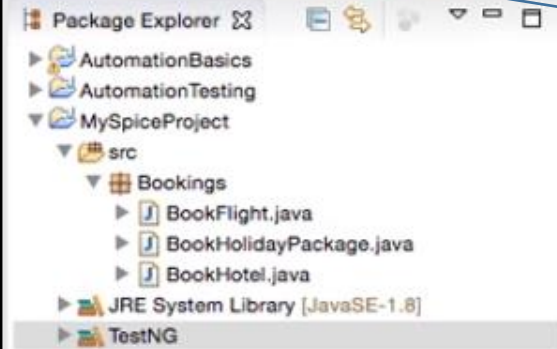
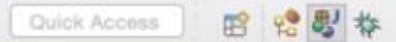
BookFlight.java BookHotel.java BookHolidayPackage.java

```
1 package bookings;
2
3 import org.testng.annotations.Test;
4
5 public class BookFlight {
6     @Test
7     public void BookFlight_RoundTrip_TestCase1()
8     {
9         System.out.println("TestCase1");
10    }
11    @Test
12    public void BookFlight_RoundTrip_TestCase2()
13    {
14        System.out.println("TestCase2");
15    }
16    @Test
17    public void BookFlight_OneWay_TestCase3()
18    {
19        System.out.println("TestCase3");
20    }
21    @Test
22    public void BookFlight_OneWay_TestCase4()
23    {
24        System.out.println("TestCase4");
25    }
```

Problems Javadoc Declaration Console Results of running class BookFlight

BookFlight [TestNG] /Library/Java/JavaVirtualMachines/jdk1.8.0\_101.jdk/Contents/Home/bin/java (Jan 24, 2018, 2:10:32 AM)





BookFlight.java BookHotel.java BookHolidayPackage.java

```
1 package bookings;
2
3 import org.testng.annotations.Test;
4
5 public class BookFlight {
6     @Test
7     public void BookFlight_RoundTrip_TestCase1()
8     {
9         System.out.println("TestCase1");
10    }
11    @Test
12    public void BookFlight_RoundTrip_TestCase2()
13    {
14        System.out.println("TestCase2");
15    }
16    @Test
17    public void BookFlight_OneWay_TestCase3()
18    {
19        System.out.println("TestCase3");
20    }
21    @Test
22    public void BookFlight_OneWay_TestCase4()
23    {
24        System.out.println("TestCase4");
25    }
26 }
```

Run this code:

- Testcases run in an alphabetical order
- All testcases passed

Problems Javadoc Declaration Console Results of running class BookFlight

<terminated> BookFlight [TestNG] /Library/Java/JavaVirtualMachines/jdk1.8.0\_101.jdk/Contents/Home/bin/java (Jan 24, 2018, 2:10:32 AM)

[TestNG] Running:  
/private/var/folders/rd/j\_9dcq154zb4jfht32c9qznr0000gn/T/testng-eclipse--1915428432/testng-customsuite.xml

TestCase3  
TestCase4  
TestCase1  
TestCase2

[Utils] Attempting to create /Users/supriyabaru/Documents/workspace/MySpiceProject/test-output/Default suite/Default test.xml

[Utils] Directory /Users/supriyabaru/Documents/workspace/MySpiceProject/test-output/Default suite exists: true

PASSED: BookFlight\_OneWay\_TestCase3  
PASSED: BookFlight\_OneWay\_TestCase4  
PASSED: BookFlight\_RoundTrip\_TestCase1  
PASSED: BookFlight\_RoundTrip\_TestCase2

Default test

# Doing something before/after all tests

- BeforeTest
- AfterTest



workspace - Java - MySpiceProject/src/Bookings/BookFlight.java - Eclipse



Quick Access



\*BookFlight.java BookHotel.java BookHolidayPackage.java

```
1 package Bookings;
2
3 import org.testng.annotations.Test;
4
5 public class BookFlight {
6
7     @BeforeTest
8     public void Beforetesttestcase1()
9     {
10         |
11     }
12     @Test
13     public void BookFlight_RoundTrip_TestCase1()
14     {
15         System.out.println("TestCase1");
16     }
17     @Test
18     public void BookFlight_RoundTrip_TestCase2()
19     {
20         System.out.println("TestCase2");
21     }
22     @Test
23     public void BookFlight_OneWay_TestCase3()
24     {
25         Svsstem.out.println("TestCase3");
```

Problems Javadoc Declaration Console Results of running class BookFlight

&lt;terminated&gt; BookFlight [TestNG] /Library/Java/JavaVirtualMachines/jdk1.8.0\_101.jdk/Contents/Home/bin/java (Jan 24, 2018, 2:10:32 AM)

[TestNG] Running:

/private/var/folders/rd/j\_9dcq154zb4jfht32c9qznr0000gn/T/testng-eclipse--1915428432/testng-customsuite.xml

TestCase3

TestCase4

TestCase1

TestCase2

[Utils] Attempting to create /Users/supriyabaru/Documents/workspace/MySpiceProject/test-output/Default suite/Default test.xml

[Utils] Directory /Users/supriyabaru/Documents/workspace/MySpiceProject/test-output/Default suite exists: true

PASSED: BookFlight\_OneWay\_TestCase3

PASSED: BookFlight\_OneWay\_TestCase4

PASSED: BookFlight\_RoundTrip\_TestCase1

PASSED: BookFlight\_RoundTrip\_TestCase2

Default test

Writable

Smart Insert

10 : 9

Eclipse

workspace - Java - MySpiceProject/src/Bookings/BookFlight.java - Eclipse

Package Explorer

- AutomationBasics
- AutomationTesting
- MySpiceProject
  - src
    - Bookings
      - BookFlight.java
      - BookHolidayPackage.java
      - BookHotel.java
  - JRE System Library [JavaSE-1.8]
  - TestNG

BookFlight.java

```
1 package Bookings;
2
3 import org.testng.annotations.Test;
4
5 public class BookFlight {
6
7     @BeforeTest
8     {
9         // Import 'BeforeTest' (org.testng.annotations)
10         // Change to 'BeforeGroups' (org.testng.annotations)
11         // Change to 'BeforeMethod' (org.testng.annotations)
12         // Create annotation 'BeforeTest'
13         // Rename in file (362 R)
14         // Pull @Test annotations to the class level
15         // Fix project setup...
16     }
17
18     @Test
19     public void BookFlight_OneWay_TestCase3()
20     {
21         System.out.println("TestCase3");
22     }
23 }
24
25
```

Import the 'BeforeTest' class for the BeforeTest annotation

Problems Javadoc Declaration Console Results of running class BookFlight

<terminated> BookFlight [TestNG] /Library/Java/JavaVirtualMachines/jdk1.8.0\_101.jdk/Contents/Home/bin/java (Jan 24, 2018, 2:10:32 AM)

[TestNG] Running:

```
/private/var/folders/rd/j_9dcq154zb4jfht32c9qznr0000gn/T/testng-eclipse--1915428432/testng-customsuite.xml
```

TestCase3  
TestCase4  
TestCase1  
TestCase2

[Utils] Attempting to create /Users/supriyabaru/Documents/workspace/MySpiceProject/test-output/Default suite/Default test.xml

[Utils] Directory /Users/supriyabaru/Documents/workspace/MySpiceProject/test-output/Default suite exists: true

PASSED: BookFlight\_OneWay\_TestCase3  
PASSED: BookFlight\_OneWay\_TestCase4  
PASSED: BookFlight\_RoundTrip\_TestCase1  
PASSED: BookFlight\_RoundTrip\_TestCase2

Default test

BeforeTest cannot be resolved to a type

Writable Smart Insert 7 : 16

Eclipse File Edit Source Refactor Navigate Project Run Window Help

workspace - Java - MySpiceProject/src/Bookings/BookFlight.java - Eclipse

Package Explorer

- AutomationBasics
- AutomationTesting
- MySpiceProject
  - src
    - Bookings
      - BookFlight.java
      - BookHolidayPackage.java
      - BookHotel.java
  - JRE System Library [JavaSE-1.8]
  - TestNG

\*BookFlight.java BookHotel.java BookHolidayPackage.java

```
2
3 import org.testng.annotations.BeforeTest;
4 import org.testng.annotations.Test;
5
6 public class BookFlight {
7
8     @BeforeTest
9     public void Beforetesttestcase1()
10    {
11        System.out.println("This should be first");
12    }
13
14    @Test
15    public void BookFlight_RoundTrip_TestCase1()
16    {
17        System.out.println("TestCase1");
18    }
19
20    @Test
21    public void BookFlight_RoundTrip_TestCase2()
22    {
23        System.out.println("TestCase2");
24    }
25
26    @Test
27    public void BookFlight_OneWay_TestCase3()
28    {
29        System.out.println("TestCase3");
30    }
31}
```

- This method will run before all tests
- For example, before any test, we clear data or open a browser

Problems Javadoc Declaration Console Results of running class BookFlight

<terminated> BookFlight [TestNG] /Library/Java/JavaVirtualMachines/jdk1.8.0\_101.jdk/Contents/Home/bin/java (Jan 24, 2018, 2:10:32 AM)

[TestNG] Running:  
/private/var/folders/rd/j\_9dcq154zb4jfht32c9qznr0000gn/T/testng-eclipse--1915428432/testng-customsuite.xml

TestCase3  
TestCase4  
TestCase1  
TestCase2

[Utils] Attempting to create /Users/supriyabaru/Documents/workspace/MySpiceProject/test-output/Default suite/Default test.xml  
[Utils] Directory /Users/supriyabaru/Documents/workspace/MySpiceProject/test-output/Default suite exists: true  
PASSED: BookFlight\_OneWay\_TestCase3  
PASSED: BookFlight\_OneWay\_TestCase4  
PASSED: BookFlight\_RoundTrip\_TestCase1  
PASSED: BookFlight\_RoundTrip\_TestCase2

Default test

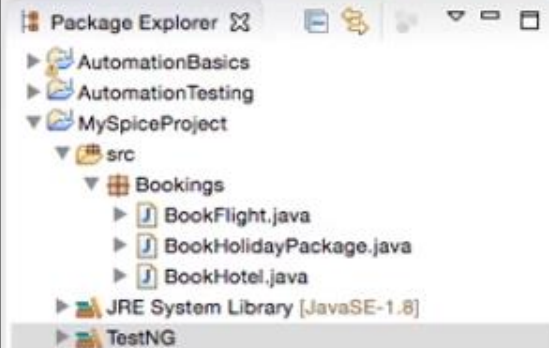
Writable Smart Insert 11 : 50



workspace - Java - MySpiceProject/src/Bookings/BookFlight.java - Eclipse



Quick Access



\*BookFlight.java BookHotel.java BookHolidayPackage.java

```
6 public class BookFlight {
7
8
9     @Test
10    public void BookFlight_RoundTrip_TestCase1()
11    {
12        System.out.println("TestCase1");
13    }
14    @Test
15    public void BookFlight_RoundTrip_TestCase2()
16    {
17        System.out.println("TestCase2");
18    }
19    @BeforeTest
20    public void Beforetesttestcase1()
21    {
22        System.out.println("This should be first ");
23    }
24    @Test
25    public void BookFlight_OneWay_TestCase3()
26    {
27        System.out.println("TestCase3");
28    }
29    @Test
30    public void BookFlight_OneWay_TestCase4()
```

- This can be put anywhere in the program

Problems Javadoc Declaration Console Results of running class BookFlight

&lt;terminated&gt; BookFlight [TestNG] /Library/Java/JavaVirtualMachines/jdk1.8.0\_101.jdk/Contents/Home/bin/java (Jan 24, 2018, 2:10:32 AM)

[TestNG] Running:

/private/var/folders/rd/j\_9dcq154zb4jfht32c9qznr0000gn/T/testng-eclipse--1915428432/testng-customsuite.xml

TestCase3

TestCase4

TestCase1

TestCase2

[Utils] Attempting to create /Users/supriyabaru/Documents/workspace/MySpiceProject/test-output/Default suite/Default test.xml

[Utils] Directory /Users/supriyabaru/Documents/workspace/MySpiceProject/test-output/Default suite exists: true

PASSED: BookFlight\_OneWay\_TestCase3

PASSED: BookFlight\_OneWay\_TestCase4

PASSED: BookFlight\_RoundTrip\_TestCase1

PASSED: BookFlight\_RoundTrip\_TestCase2

Default test

Writable

Smart Insert

22 : 50

workspace - Java - MySpiceProject/src/Bookings/BookFlight.java - Eclipse



Package Explorer

- AutomationBasics
- AutomationTesting
- MySpiceProject
  - src
    - Bookings
      - BookFlight.java
      - BookHolidayPackage.java
      - BookHotel.java
  - JRE System Library [JavaSE-1.8]
  - TestNG

\*BookFlight.java BookHotel.java BookHolidayPackage.java

```

11 {
12     System.out.println("TestCase1");
13 }
14 @Test
15 public void BookFlight_RoundTrip_TestCase2()
16 {
17     System.out.println("TestCase2");
18 }
19 @BeforeTest
20 public void Beforetesttestcase1()
21 {
22     System.out.println("This should be first ");
23 }
24 @Test
25 public void BookFlight_OneWay_TestCase3()
26 {
27     System.out.println("TestCase3");
28 }
29 @AfterTest
30 public void Aftertesttestcase1()
31 {
32     System.out.println("This should be last");
33 }
34 @Test
35 public void BookFlight_OneWay_TestCase4()
    
```

• Similarly, this method will run after all tests

Problems Javadoc Declaration Console Results of running class BookFlight

```

<terminated> BookFlight [TestNG] /Library/Java/JavaVirtualMachines/jdk1.8.0_101.jdk/Contents/Home/bin/java (Jan 24, 2018, 2:10:32 AM)
[TestNG] Running:
/private/var/folders/rd/j_9dcq154zb4jfht32c9qznr0000gn/T/testng-eclipse--1915428432/testng-customsuite.xml

TestCase3
TestCase4
TestCase1
TestCase2
[Utils] Attempting to create /Users/supriyabaru/Documents/workspace/MySpiceProject/test-output/Default suite/Default test.xml
[Utils] Directory /Users/supriyabaru/Documents/workspace/MySpiceProject/test-output/Default suite exists: true
PASSED: BookFlight_OneWay_TestCase3
PASSED: BookFlight_OneWay_TestCase4
PASSED: BookFlight_RoundTrip_TestCase1
PASSED: BookFlight_RoundTrip_TestCase2

=====
Default test
    
```

Package Explorer

- AutomationBasics
- AutomationTesting
- MySpiceProject
  - src
    - Bookings
      - BookFlight.java
      - BookHolidayPackage.java
      - BookHotel.java
  - JRE System Library [JavaSE-1.8]
  - TestNG

\*BookFlight.java BookHotel.java BookHolidayPackage.java

```

11 {
12     System.out.println("TestCase1");
13 }
14 @Test
15 public void BookFlight_RoundTrip_TestCase2()
16 {
17     System.out.println("TestCase2");
18 }
19 @BeforeTest
20 public void Beforetesttestcase1()
21 {
22     System.out.println("This should be first ");
23 }
24 @Test
25 public void BookFlight_OneWay_TestCase3()
26 {
27     System.out.println("TestCase3");
28 }
29 @AfterTest
30 {
31 }
32
33
34
35
    
```

Import the 'AfterTest' class for the AfterTest annotation

Import 'AfterTest' (org.testng.annotations)

- Create annotation 'AfterTest'
- Rename in file (362 R)
- Pull @Test annotations to the class level
- Fix project setup...

```

import org.testng.annotations.AfterTest;
import org.testng.annotations.BeforeTest;
import org.testng.annotations.Test;
    
```

Problems

<terminated>

[TestNG] R

/private

TestCase3

TestCase4

TestCase1

TestCase2

[Utils] Attempting to create /Users/supriyabaru/Documents/workspace/MySpiceProject/test-output/Default suite/Default test.xml

[Utils] Directory /Users/supriyabaru/Documents/workspace/MySpiceProject/test-output/Default suite exists: true

PASSED: BookFlight\_OneWay\_TestCase3

PASSED: BookFlight\_OneWay\_TestCase4

PASSED: BookFlight\_RoundTrip\_TestCase1

PASSED: BookFlight\_RoundTrip\_TestCase2

Default test





BookFlight.java BookHotel.java BookHolidayPackage.java

```

12 {
13     System.out.println("TestCase1");
14 }
15 @Test
16 public void BookFlight_RoundTrip_TestCase2()
17 {
18     System.out.println("TestCase2");
19 }
20 @BeforeTest
21 public void Beforetesttestcase1()
22 {
23     System.out.println("This should be first ");
24 }
25 @Test
26 public void BookFlight_OneWay_TestCase3()
27 {
28     System.out.println("TestCase3");
29 }
30 @AfterTest
31 public void Aftertesttestcase1()
32 {
33     System.out.println("This should be last ");
34 }
35 @Test
36 public void BookFlight_OneWay_TestCase4()
    
```

Run this code:

- BeforeTest runs firstly
- AfterTest runs lastly

Problems Javadoc Declaration Console Results of running class BookFlight

<terminated> BookFlight [TestNG] /Library/Java/JavaVirtualMachines/jdk1.8.0\_101.jdk/Contents/Home/bin/java (Jan 24, 2018, 2:14:35 AM)

[TestNG] Running:  
/private/var/folders/rd/j\_9dcq154zb4jfht32c9qznr0000gn/T/testng-eclipse--1168509868/testng-customsuite.xml

This should be first  
TestCase3  
TestCase4  
TestCase1  
TestCase2  
This should be last

[Utils] Attempting to create /Users/supriyabaru/Documents/workspace/MySpiceProject/test-output/Default suite/Default test.xml  
[Utils] Directory /Users/supriyabaru/Documents/workspace/MySpiceProject/test-output/Default suite exists: true  
PASSED: BookFlight\_OneWay\_TestCase3  
PASSED: BookFlight\_OneWay\_TestCase4  
PASSED: BookFlight\_RoundTrip\_TestCase1  
PASSED: BookFlight\_RoundTrip\_TestCase2

# Doing something before/after each test

- BeforeMethod
- AfterMethod

workspace - Java - MySpiceProject/src/Bookings/BookFlight.java - Eclipse



\*BookFlight.java BookHotel.java BookHolidayPackage.java

```
1 package Bookings;
2
3 import org.testng.annotations.AfterTest;
4 import org.testng.annotations.BeforeTest;
5 import org.testng.annotations.Test;
6
7 public class BookFlight {
8
9     @BeforeMethod
10    public void BeforeMethodTestcase1()
11    {
12        System.out.println("this code will run before every testcase");
13    }
14
15    @Test
16    public void BookFlight_RoundTrip_TestCase1()
17    {
18        System.out.println("TestCase1");
19    }
20
21    @Test
22    public void BookFlight_RoundTrip_TestCase2()
23    {
24        System.out.println("TestCase2");
25    }
26
27    @BeforeTest
28    public void Beforetesttestcase1()
```

This code will run before each testcase

Problems Javadoc Declaration Console Results of running class BookFlight

&lt;terminated&gt; BookFlight [TestNG] /Library/Java/JavaVirtualMachines/jdk1.8.0\_101.jdk/Contents/Home/bin/java (Jan 24, 2018, 2:14:35 AM)

[TestNG] Running:

/private/var/folders/rd/j\_9dcq154zb4jfht32c9qznr0000gn/T/testng-eclipse--1168509868/testng-customsuite.xml

This should be first

TestCase3

TestCase4

TestCase1

TestCase2

This should be last

[Utils] Attempting to create /Users/supriyabaru/Documents/workspace/MySpiceProject/test-output/Default suite/Default test.xml

[Utils] Directory /Users/supriyabaru/Documents/workspace/MySpiceProject/test-output/Default suite exists: true

PASSED: BookFlight\_OneWay\_TestCase3

PASSED: BookFlight\_OneWay\_TestCase4

PASSED: BookFlight\_RoundTrip\_TestCase1

PASSED: BookFlight\_RoundTrip\_TestCase2

```

1 package Bookings;
2
3 import org.testng.annotations.AfterTest;
4 import org.testng.annotations.BeforeTest;
5 import org.testng.annotations.Test;
6
7 public class BookFlight {
8
9     @BeforeMethod
10
11     {
12         import org.testng.annotations.AfterTest;
13         import org.testng.annotations.BeforeMethod;
14         import org.testng.annotations.BeforeTest;
15         ...
16     }
17
18 }
19
20
21
22
23
24 @BeforeTest
25 public void Beforetesttestcase1()
    
```

Import the 'BeforeMethod' class for the BeforeMethod annotation

Problems Javadoc Declaration Console Results of running class BookFlight

<terminated> BookFlight [TestNG] /Library/Java/JavaVirtualMachines/jdk1.8.0\_101.jdk/Contents/Home/bin/java (Jan 24, 2018, 2:14:35 AM)

[TestNG] Running:  
/private/var/folders/rd/j\_9dcq154zb4jfht32c9qznr0000gn/T/testng-eclipse--1168509868/testng-customsuite.xml

This should be first  
TestCase3  
TestCase4  
TestCase1  
TestCase2  
This should be last

[Utils] Attempting to create /Users/supriyabaru/Documents/workspace/MySpiceProject/test-output/Default suite/Default test.xml  
[Utils] Directory /Users/supriyabaru/Documents/workspace/MySpiceProject/test-output/Default suite exists: true  
PASSED: BookFlight\_OneWay\_TestCase3  
PASSED: BookFlight\_OneWay\_TestCase4  
PASSED: BookFlight\_RoundTrip\_TestCase1  
PASSED: BookFlight\_RoundTrip\_TestCase2



Eclipse File Edit Source Refactor Navigate Search Project Run Window Help

workspace - Java - MySpiceProject/src/Bookings/BookFlight.java - Eclipse

Package Explorer

- AutomationBasics
- AutomationTesting
- MySpiceProject
  - src
    - Bookings
      - BookFlight.java
      - BookHolidayPackage.java
      - BookHotel.java
  - JRE System Library [JavaSE-1.8]
  - TestNG

BookFlight.java

```
2
3 import org.testng.annotations.AfterTest;
4 import org.testng.annotations.BeforeMethod;
5 import org.testng.annotations.BeforeTest;
6 import org.testng.annotations.Test;
7
8 public class BookFlight {
9
10 @BeforeMethod
11 public void BeforeMethodTestcase1()
12 {
13     System.out.println("this code will run before every testcase");
14 }
15 @Test
16 public void BookFlight_RoundTrip_TestCase1()
17 {
18     System.out.println("TestCase1");
19 }
20 @Test
21 public void BookFlight_RoundTrip_TestCase2()
22 {
23     System.out.println("TestCase2");
24 }
25 @BeforeTest
26 public void Beforetesttestcase1()
```

Run this code:

- BeforeTest runs firstly
- AfterTest runs lastly
- BeforeMethod runs before each testcase

Problems Javadoc Declaration Console Results of running class BookFlight

<terminated> BookFlight [TestNG] /Library/Java/JavaVirtualMachines/jdk1.8.0\_101.jdk/Contents/Home/bin/java (Jan 24, 2018, 2:16:41 AM)

[TestNG] Running:  
/private/var/folders/rd/j\_9dcq154zb4jfht32c9qznr0000gn/T/testng-eclipse-1181752596/testng-customsuite.xml

This should be first  
this code will run before every testcase  
TestCase3  
this code will run before every testcase  
TestCase4  
this code will run before every testcase  
TestCase1  
this code will run before every testcase  
TestCase2  
This should be last

[Utils] Attempting to create /Users/supriyabaru/Documents/workspace/MySpiceProject/test-output/Default suite/Default test.xml  
[Utils] Directory /Users/supriyabaru/Documents/workspace/MySpiceProject/test-output/Default suite exists: true  
PASSED: BookFlight\_OneWay\_TestCase1

Writable Smart Insert 10:18



workspace - Java - MySpiceProject/src/Bookings/BookFlight.java - Eclipse



Quick Access



\*BookFlight.java BookHotel.java BookHolidayPackage.java

```
1 package Bookings;
2
3 import org.testng.annotations.AfterTest;
4 import org.testng.annotations.BeforeMethod;
5 import org.testng.annotations.BeforeTest;
6 import org.testng.annotations.Test;
7
8 public class BookFlight {
9
10     @BeforeMethod
11     public void BeforeMethodTestcase1()
12     {
13         System.out.println("this code will run before every testcase");
14     }
15     @AfterMethod
16     public void AfterMethodTestcase1()
17     {
18         System.out.println("this code will run after every testcase");
19     }
20     @Test
21     public void BookFlight_RoundTrip_TestCase1()
22     {
23         System.out.println("TestCase1");
24     }
25     @Test
```

- Similarly, this method will run after each testcase

Problems Javadoc Declaration Console Results of running class BookFlight

&lt;terminated&gt; BookFlight [TestNG] /Library/Java/JavaVirtualMachines/jdk1.8.0\_101.jdk/Contents/Home/bin/java (Jan 24, 2018, 2:16:41 AM)

[TestNG] Running:

/private/var/folders/rd/j\_9dcq154zb4jfht32c9qznr0000gn/T/testng-eclipse-1181752596/testng-customsuite.xml

This should be first

this code will run before every testcase

TestCase3

this code will run before every testcase

TestCase4

this code will run before every testcase

TestCase1

this code will run before every testcase

TestCase2

This should be last

[Utils] Attempting to create /Users/supriyabaru/Documents/workspace/MySpiceProject/test-output/Default suite/Default test.xml

[Utils] Directory /Users/supriyabaru/Documents/workspace/MySpiceProject/test-output/Default suite exists: true

PASSED: BookFlight OneWay TestCase3

Writable

Smart Insert

18 : 53

Package Explorer

- AutomationBasics
- AutomationTesting
- MySpiceProject
  - src
    - Bookings
      - BookFlight.java
      - BookHolidayPackage.java
      - BookHotel.java
  - JRE System Library [JavaSE-1.8]
  - TestNG

```

1 package Bookings;
2
3 import org.testng.annotations.AfterTest;
4 import org.testng.annotations.BeforeMethod;
5 import org.testng.annotations.BeforeTest;
6 import org.testng.annotations.Test;
7
8 public class BookFlight {
9
10     @BeforeMethod
11     public void BeforeMethodTestcase1()
12     {
13         System.out.println("this code will run before every testcase");
14     }
15     @AfterMethod
16     {
17         // Import 'AfterMethod' (org.testng.annotations)
18         // Create annotation 'AfterMethod'
19         // Rename in file (⌘R)
20         // Pull @Test annotations to the class level
21         // Fix project setup...
22     }
23
24 }
25

```

Import the 'AfterMethod' class for the AfterMethod annotation

Problems

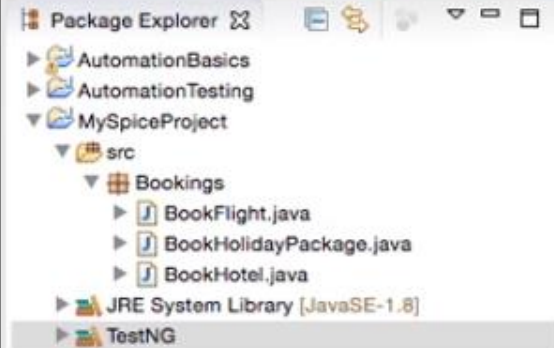
<terminated>

[TestNG] Running:  
/private/var/folders/rd/j\_9dcq154zb4jfht32c9qznr0000gn/T/testng-eclipse-1181752596/testng-customsuite.xml

This should be first  
this code will run before every testcase  
TestCase3  
this code will run before every testcase  
TestCase4  
this code will run before every testcase  
TestCase1  
this code will run before every testcase  
TestCase2  
This should be last

[Utils] Attempting to create /Users/supriyabaru/Documents/workspace/MySpiceProject/test-output/Default suite/Default test.xml  
[Utils] Directory /Users/supriyabaru/Documents/workspace/MySpiceProject/test-output/Default suite exists: true  
PASSED: BookFlight OneWay Testcase3

workspace - Java - MySpiceProject/src/Bookings/BookFlight.java - Eclipse



BookFlight.java BookHotel.java BookHolidayPackage.java

```
2
3 import org.testng.annotations.AfterMethod;
4 import org.testng.annotations.AfterTest;
5 import org.testng.annotations.BeforeMethod;
6 import org.testng.annotations.BeforeTest;
7 import org.testng.annotations.Test;
8
9 public class BookFlight {
10
11     @BeforeMethod
12     public void BeforeMethodTestcase1()
13     {
14         System.out.println("this code will run before every testcase");
15     }
16     @AfterMethod
17     public void AfterMethodTestcase1()
18     {
19         System.out.println("this code will run after every testcase");
20     }
21     @Test
22     public void BookFlight_RoundTrip_TestCase1()
23     {
24         System.out.println("TestCase1");
25     }
26     @Test
```

Run this code:

- BeforeTest runs firstly
- AfterTest runs lastly
- BeforeMethod runs before each testcase
- AfterMethod runs after each testcase

Problems Javadoc Declaration Console Results of running class BookFlight

&lt;terminated&gt; BookFlight [TestNG] /Library/Java/JavaVirtualMachines/jdk1.8.0\_101.jdk/Contents/Home/bin/java (Jan 24, 2018, 2:18:11 AM)

[TestNG] Running:

/private/var/folders/rd/j\_9dcq154zb4jfht32c9qznr0000gn/T/testng-eclipse--1370581306/testng-customsuite.xml

```
This should be first
this code will run before every testcase
TestCase3
this code will run after every testcase
this code will run before every testcase
TestCase4
this code will run after every testcase
this code will run before every testcase
TestCase1
this code will run after every testcase
this code will run before every testcase
TestCase2
this code will run after every testcase
```

- We can add some attributes to annotations in order to make them more useful.



Eclipse File Edit Source Refactor Navigate Search Project Run Window Help

workspace - Java - MySpiceProject/src/Bookings/BookFlight.java - Eclipse

Package Explorer

- AutomationBasics
- AutomationTesting
- MySpiceProject
  - src
    - Bookings
      - BookFlight.java
      - BookHolidayPackage.java
      - BookHotel.java
  - JRE System Library [JavaSE-1.8]
  - TestNG

BookFlight.java BookHotel.java BookHolidayPackage.java

```
import org.testng.annotations.*;

8
9 public class BookFlight {
10
11     @BeforeMethod
12     public void BeforeMethodTestcase1()
13     {
14         System.out.println("this code will run before every testcase");
15     }
16     @AfterMethod
17     public void AfterMethodTestcase1()
18     {
19         System.out.println("this code will run after every testcase");
20     }
21     @Test
22     public void BookFlight_RoundTrip_TestCase1()
23     {
24         System.out.println("TestCase1");
25     }
26     @Test(dependsOnMethods={"BookFlight_RoundTrip_TestCase1"})
27     public void BookFlight_RoundTrip_TestCase2()
28     {
29         System.out.println("TestCase2");
30     }
31     @BeforeTest
```

For example, using the **dependsOnMethods** attribute, we set that BookFlightRoundTrip\_TestCase1 has to run before RoundTrip\_TestCase2

Problems Javadoc Declaration Console Results of running class BookFlight

<terminated> BookFlight [TestNG] /Library/Java/JavaVirtualMachines/jdk1.8.0\_101.jdk/Contents/Home/bin/java (Jan 24, 2018, 2:21:54 AM)

testcase4  
this code will run after every testcase  
this code will run before every testcase  
TestCase1  
this code will run after every testcase  
this code will run before every testcase  
TestCase3  
this code will run after every testcase  
this code will run before every testcase  
TestCase2  
this code will run after every testcase  
This should be last

[Utils] Attempting to create /Users/supriyabaru/Documents/workspace/MySpiceProject/test-output/Default suite/Default test.xml  
[Utils] Directory /Users/supriyabaru/Documents/workspace/MySpiceProject/test-output/Default suite exists: true  
PASSED: BookFlight\_OneWay\_TestCase4  
PASSED: BookFlight\_RoundTrip\_TestCase1





```
BookFlight.java BookHotel.java BookHolidayPackage.java
29     System.out.println("TestCase2");
30 }
31 @BeforeTest
32 public void Beforetesttestcase1()
33 {
34     System.out.println("This should be first ");
35 }
36 @Test
37 public void BookFlight_OneWay_TestCase3()
38 {
39     System.out.println("TestCase3");
40 }
41 @AfterTest
42 public void Aftertesttestcase1()
43 {
44     System.out.println("This should be last ");
45 }
46 @Test(enabled=false)
47 public void BookFlight_OneWay_TestCase4()
48 {
49     System.out.println("TestCase4");
50 }
51
52 }
53
```

We set enabled=false if we don't want to run this testcase

Problems Javadoc Declaration Console Results of running class BookFlight

<terminated> BookFlight [TestNG] /Library/Java/JavaVirtualMachines/jdk1.8.0\_101.jdk/Contents/Home/bin/java (Jan 24, 2018, 2:24:57 AM)

This should be first  
this code will run before every testcase  
TestCase1  
this code will run after every testcase  
this code will run before every testcase  
TestCase3  
this code will run after every testcase  
this code will run before every testcase  
TestCase2  
this code will run after every testcase  
This should be last

[Utils] Attempting to create /Users/supriyabaru/Documents/workspace/MySpiceProject/test-output/Default suite/Default test.xml  
[Utils] Directory /Users/supriyabaru/Documents/workspace/MySpiceProject/test-output/Default suite exists: true  
PASSED: BookFlight\_RoundTrip\_TestCase1  
PASSED: BookFlight\_OneWay\_TestCase3

# Other annotations

- BeforeClass
- AfterClass
- ...

```
//BookLight.java

package Bookings;

import org.testng.annotations.AfterTest;
import org.testng.annotations.BeforeMethod;
import org.testng.annotations.BeforeTest;
import org.testng.annotations.Test;

public class BookFlight {

    @BeforeMethod

    public void BeforeMethodTestcase1()
    {
        System.out.println("This code will be run before every testcase");
    }

    @Test

    public void BookFlight_RoundTrip_TestCase1()
    {
        System.out.println("TestCase1");
    }

    @Test(dependsOnMethods={"BookFlight_RoundTrip_TestCase1"})

    public void BookFlight_RoundTrip_TestCase2()
    {
        System.out.println("TestCase2");
    }
}
```

```
@BeforeTest
public void Beforetesttestcases()
{
    System.out.println("This should be first");
}
```

```
@AfterTest
public void Aftertesttestcase1()
{
    System.out.println("This should be last");
}
```

```
@Test
public void BookFlight_RoundTrip_TestCase3()
{
    System.out.println("TestCase3");
}
```

```
@Test(enabled=false)
public void BookFlight_RoundTrip_TestCase4()
{
    System.out.println("TestCase4");
}
```

# Reference

- TestNG Annotations,  
<https://www.youtube.com/watch?v=JL4LbEi0JfU&list=PLW2TrvplfStfQqgWJmXRTwtspS6RKmtoR&index=2>

# Read more

1. TestNG Introduction,  
[https://www.youtube.com/watch?v=ok\\_sG11axFA&list=PLW2TrvplfStfQggWJmXRTwtspS6RKmtoR&index=1](https://www.youtube.com/watch?v=ok_sG11axFA&list=PLW2TrvplfStfQggWJmXRTwtspS6RKmtoR&index=1)
2. TestNG XML Config,  
[https://www.youtube.com/watch?v=m\\_OeyPYNLc8&list=PLW2TrvplfStfQggWJmXRTwtspS6RKmtoR&index=3](https://www.youtube.com/watch?v=m_OeyPYNLc8&list=PLW2TrvplfStfQggWJmXRTwtspS6RKmtoR&index=3)
3. TestNG Include and Exclude methods,  
<https://www.youtube.com/watch?v=xRLt6CG0mII&list=PLW2TrvplfStfQggWJmXRTwtspS6RKmtoR&index=4>
4. TestNG Groups,  
[https://www.youtube.com/watch?v=tN7-BYqr\\_es&list=PLW2TrvplfStfQggWJmXRTwtspS6RKmtoR&index=5](https://www.youtube.com/watch?v=tN7-BYqr_es&list=PLW2TrvplfStfQggWJmXRTwtspS6RKmtoR&index=5)
5. Parameterization using xml config file,  
<https://www.youtube.com/watch?v=G XO5vB4HqB4&list=PLW2TrvplfStfQggWJmXRTwtspS6RKmtoR&index=6>
6. @DataProvider in TestNG,  
<https://www.youtube.com/watch?v=XHLc203LmUk&list=PLW2TrvplfStfQggWJmXRTwtspS6RKmtoR&index=7>
7. TestNG Listeners,  
<https://www.youtube.com/watch?v=JchmqeNWg-w&list=PLW2TrvplfStfQggWJmXRTwtspS6RKmtoR&index=8>