

Test Fragments in JMeter (Web-Tours Application)

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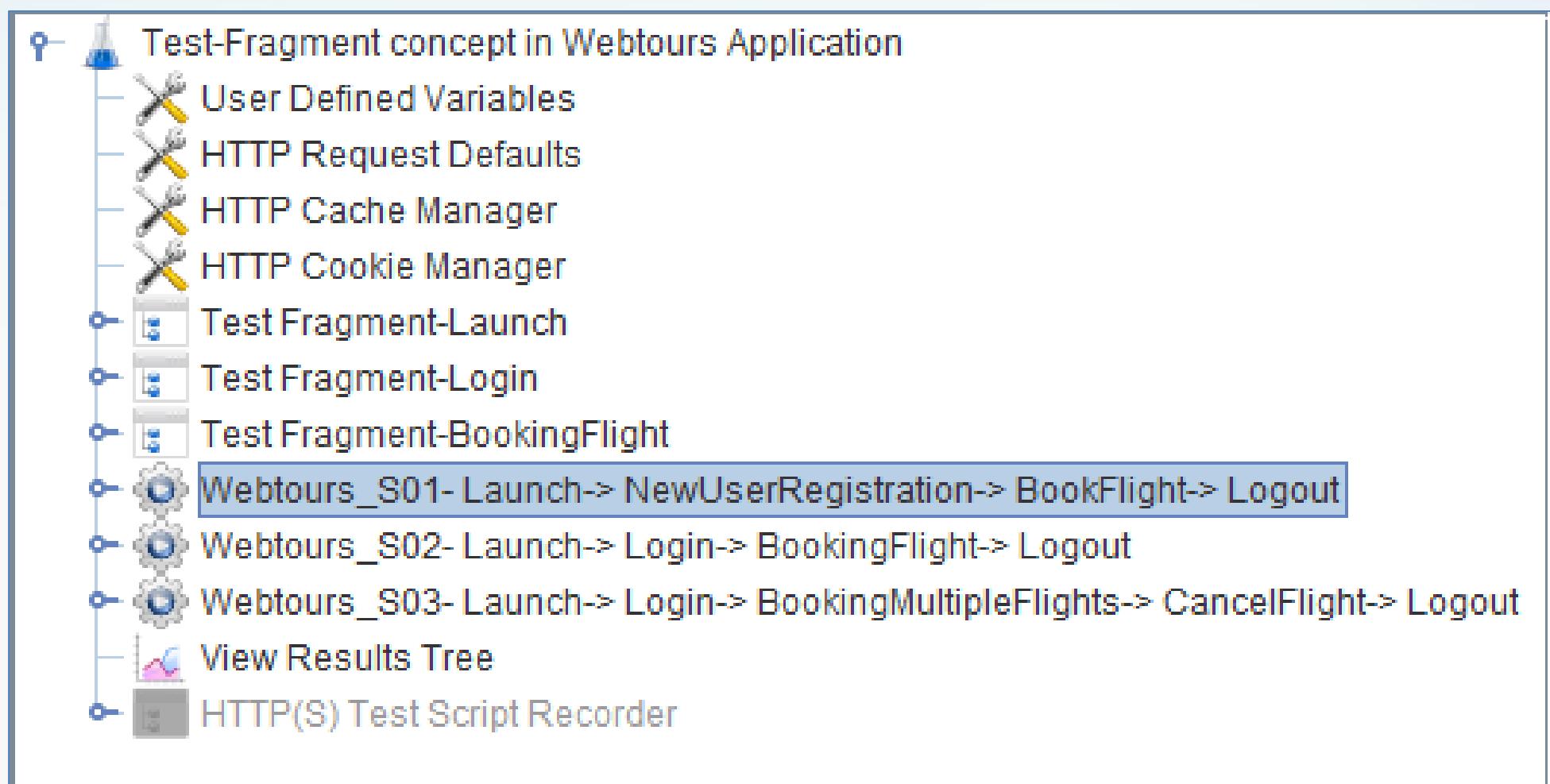
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Introduction to Test Fragments

- **What is a Test Fragment?**
 - A special type of JMeter element designed for modularization.
 - Not executed directly unless called via **Module Controller**.
- **Why use Test Fragments?**
 - Code reuse
 - Easier maintenance
 - Better readability
- **Overview of WebTours Application**
- A sample travel booking web application
- Key features:
 - Scenario:1- Launch > New User Registration > Book flight > Logout
 - Scenario:2- Launch > Login > Booking flight> Logout
 - Scenario:3- Launch > Login > Booking Multiple Flights > cancel flight > Logout

Top-level plan contains:

- Configuration elements (e.g., HTTP Cache Manager, Cookie Manager)
- Test Fragments
- Thread Groups for different test scenarios
- View Results Tree for validation



Step 1: Add a Test Fragment

- Right-click Test Plan → Add → Test Fragment.
- Rename: ‘Test Fragment – Launch’, ‘Test Fragment – Login’, ‘Test Fragment – Booking Flight’)
- Add HTTP Request and other elements under it.

HTTP Request

Name: Webtours_S02_Login_002-278
Comments:

Basic Advanced

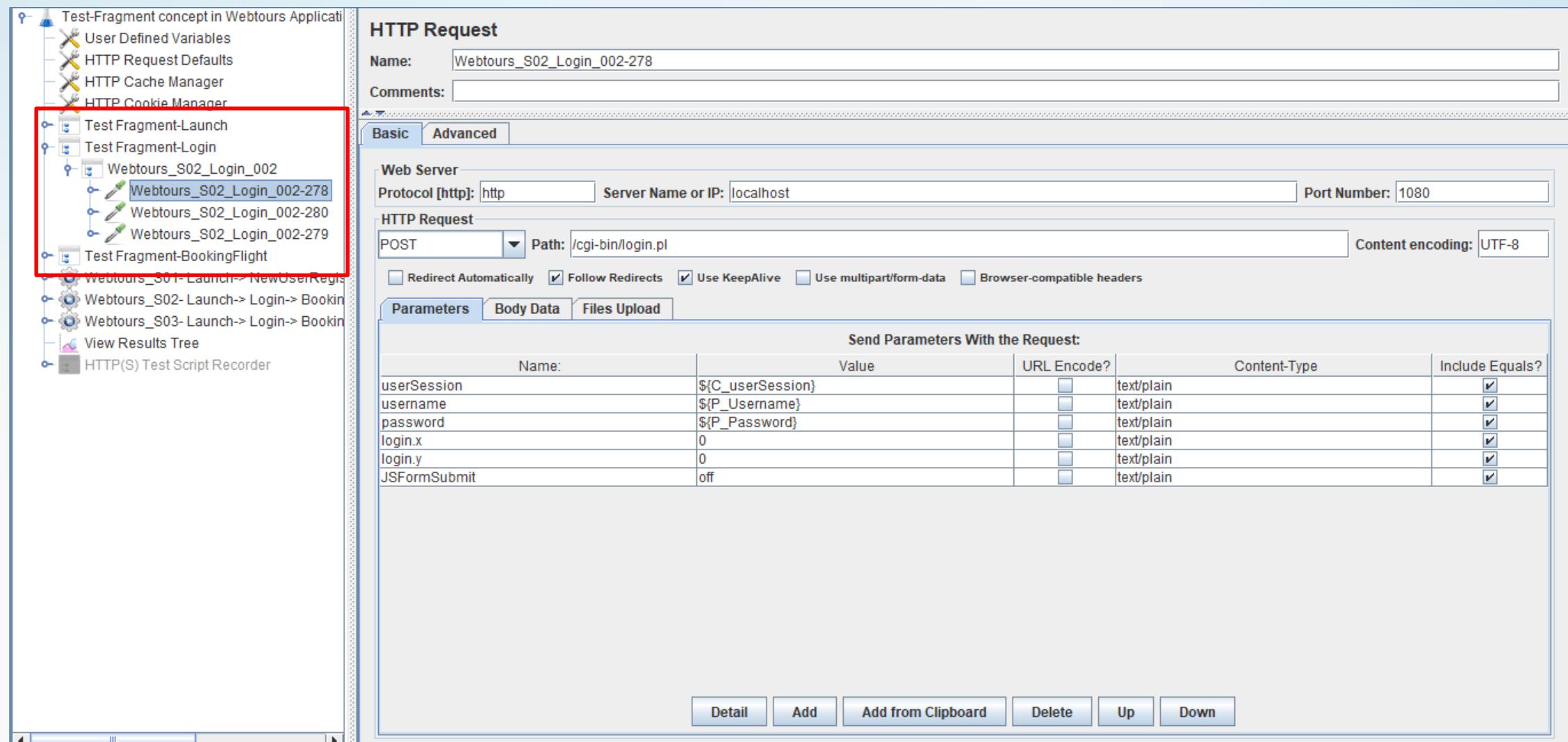
Web Server
Protocol [http]: http Server Name or IP: localhost Port Number: 1080

HTTP Request
Method: POST Path: /cgi-bin/login.pl Content encoding: UTF-8
 Redirect Automatically Follow Redirects Use KeepAlive Use multipart/form-data Browser-compatible headers

Parameters Body Data Files Upload

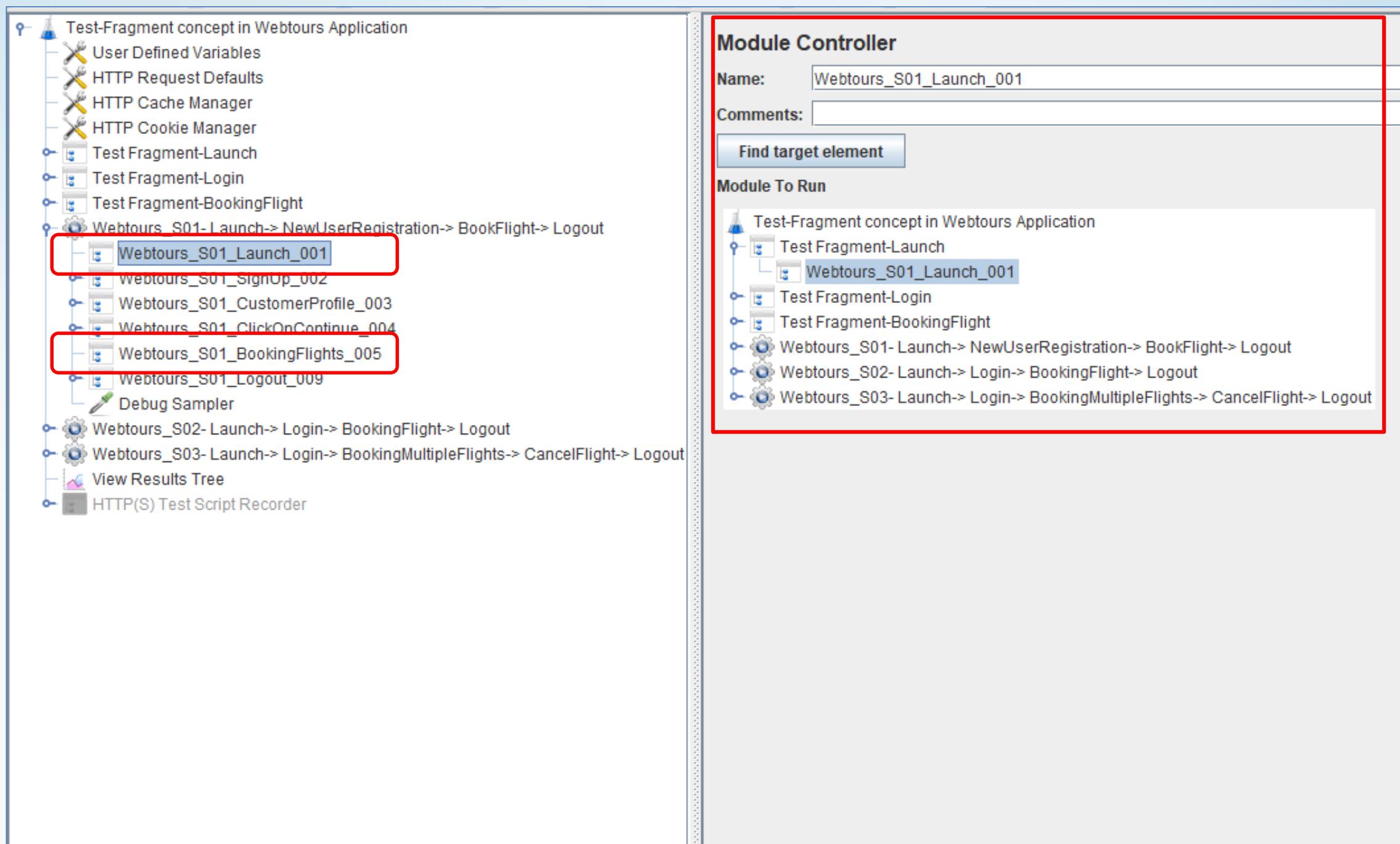
Send Parameters With the Request:					
Name:	Value	URL Encode?	Content-Type	Include Equals?	
userSession	\${C_userSession}	<input type="checkbox"/>	text/plain	<input checked="" type="checkbox"/>	
username	\${P_Username}	<input type="checkbox"/>	text/plain	<input checked="" type="checkbox"/>	
password	\${P_Password}	<input type="checkbox"/>	text/plain	<input checked="" type="checkbox"/>	
login.x	0	<input type="checkbox"/>	text/plain	<input checked="" type="checkbox"/>	
login.y	0	<input type="checkbox"/>	text/plain	<input checked="" type="checkbox"/>	
JSFormSubmit	off	<input type="checkbox"/>	text/plain	<input checked="" type="checkbox"/>	

Detail Add Add from Clipboard Delete Up Down



Step 2: Call Fragment with Module Controller

- Under Thread Group → Add → Logic Controller → Module Controller.
- Select corresponding Test Fragment from dropdown.
- Repeat for other fragments (e.g., Launch, BookingFlight).



The screenshot shows a JMeter test plan interface. On the left, the tree view displays various test elements:

- Test-Fragment concept in Webtours Application
 - User Defined Variables
 - HTTP Request Defaults
 - HTTP Cache Manager
 - HTTP Cookie Manager
 - Test Fragment-Launch
 - Test Fragment-Login
 - Test Fragment-BookingFlight
 - Webtours_S01-Launch-> NewUserRegistration-> BookFlight-> Logout
 - Webtours_S01_Launch_001
 - Webtours_S01_SignUp_002
 - Webtours_S01_CustomerProfile_003
 - Webtours_S01_ClickOnContinue_004
 - Webtours_S01_BookingFlights_005
 - Webtours_S01_Logout_009
 - Debug Sampler
 - Webtours_S02-Launch-> Login-> BookingFlight-> Logout
 - Webtours_S03-Launch-> Login-> BookingMultipleFlights-> CancelFlight-> Logout
 - View Results Tree
 - HTTP(S) Test Script Recorder

Two specific fragments are highlighted with red boxes: "Webtours_S01_Launch_001" and "Webtours_S01_BookingFlights_005".

On the right, the "Module Controller" configuration dialog is open, also with a red border around its content area:

Module Controller

Name: Webtours_S01_Launch_001
 Comments:

Module To Run

Test-Fragment concept in Webtours Application

- Test Fragment-Launch
 - Webtours_S01_Launch_001
- Test Fragment-Login
- Test Fragment-BookingFlight
- Webtours_S01-Launch-> NewUserRegistration-> BookFlight-> Logout
- Webtours_S02-Launch-> Login-> BookingFlight-> Logout
- Webtours_S03-Launch-> Login-> BookingMultipleFlights-> CancelFlight-> Logout

Step 3: Build Scenario Using Fragments

- Arrange Module Controllers in the required sequence.
- Example: Launch → Login → BookFlight → Logout.
- Use same fragments in multiple scenarios.

Screenshot of the JMeter Test Plan interface showing the arrangement of module controllers and test fragments.

The left pane displays the Test Plan structure:

- HTTP Cache Manager
- HTTP Cookie Manager
- Test Fragment-Launch**, **Test Fragment-Login**, and **Test Fragment-BookingFlight** are highlighted with a red box.
- Webtours_S01- Launch-> NewUserRegistration-> BookFlight-> Logout
 - Webtours_S01_Launch_001
 - Webtours_S01_SignUp_002
 - Webtours_S01_CustomerProfile_003
 - Webtours_S01_ClickOnContinue_004
 - Webtours_S01_BookingFlights_005
 - Webtours_S01_Logout_009
 - Debug Sampler
- Webtours_S02- Launch-> Login-> BookingFlight-> Logout
 - JSR223 PreProcessor
 - Webtours_S02_Launch_001
 - Webtours_S02_Login_002
 - Webtours_S02_BookingFlights_003
 - Webtours_S02_Logout_008
 - Debug Sampler
- Webtours_S03- Launch-> Login-> BookingMultipleFlights-> CancelFlight-> Logout
 - JSR223 PreProcessor
 - CSV Data Set Config
 - Webtours_S03_Launch_001
 - Webtours_S03_Login_002
 - Webtours_S03_ClickFlights_003
 - ForEach Controller
 - Webtours_S03_ClickOnItinerary_007
 - Webtours_S03_CancelBookedFlight_008
 - Webtours_S03_Logout_009
 - Debug Sampler
- View Results Tree
- HTTP(S) Test Script Recorder

The right pane shows the "Module Controller" configuration for "Webtours_S03_Login_002".

Module Controller

Name: Webtours_S03_Login_002
 Comments:
 Find target element

Module To Run

Test-Fragment concept in Webtours Application

- Test Fragment-Launch
- Test Fragment-Login
- Test Fragment-BookingFlight
- Webtours_S01- Launch-> NewUserRegistration-> BookFlight-> Logout
- Webtours_S02- Launch-> Login-> BookingFlight-> Logout
- Webtours_S03- Launch-> Login-> BookingMultipleFlights-> CancelFlight-> Logout

Step 4: Run and Validate

- Add Thread Group, Config Elements (Cache, Cookie, etc.).
- Use View Results Tree to validate flow.
- Ensure all fragments are being called properly.

Screenshot of the JMeter interface showing the Test Plan tree and the View Results Tree listener.

Test Plan Structure:

- HTTP Cache Manager
- HTTP Cookie Manager
- Test Fragment-Launch
- Test Fragment-Login
- Test Fragment-BookingFlight
- Webtours_S01-Launch-> NewUserRegistration-> BookFlight-> Logout
 - Webtours_S01_Launch_001
 - Webtours_S01_SignUp_002
 - Webtours_S01_CustomerProfile_003
 - Webtours_S01_ClickOnContinue_004
 - Webtours_S01_BookingFlights_005
 - Webtours_S01_Logout_009
 - Debug Sampler
- Webtours_S02-Launch-> Login-> BookingFlight-> Logout
 - JSR223 PreProcessor
 - Webtours_S02_Launch_001
 - Webtours_S02_Login_002
 - Webtours_S02_BookingFlights_003
 - Webtours_S02_Logout_008
 - Debug Sampler
- Webtours_S03-Launch-> Login-> BookingMultipleFlights-> CancelFlight-> Logout
 - JSR223 PreProcessor
 - CSV Data Set Config
 - Webtours_S03_Launch_001
 - Webtours_S03_Login_002
 - Webtours_S03_ClickFlights_003
 - ForEach Controller
 - Webtours_S03_ClickOnItinerary_007
 - Webtours_S03_CancelBookedFlight_008
 - Webtours_S03_Logout_009
 - Debug Sampler
- View Results Tree
- HTTP(S) Test Script Recorder

View Results Tree Listener Configuration:

- Name: View Results Tree
- Comments:
- Write results to file / Read from file
- Filename:
- Log/Display Only: Errors

View Results Tree Data:

The tree view shows two sets of requests, each with nine successful samples (indicated by green checkmarks). The first set corresponds to the Webtours_S01 test fragment, and the second set corresponds to the Webtours_S02 test fragment.

Request Type	Sub-Request	Count
Sampler result	Webtours_S01_Launch_001	1
Sampler result	Webtours_S01_SignUp_002	1
Sampler result	Webtours_S01_CustomerProfile_003	1
Sampler result	Webtours_S01_ClickOnContinue_004	1
Sampler result	Webtours_S01_BookingFlights_005	1
Sampler result	Webtours_S01_Logout_009	1
Sampler result	Webtours_S02_Launch_001	1
Sampler result	Webtours_S02_Login_002	1
Sampler result	Webtours_S02_BookingFlights_003	1
Sampler result	Webtours_S02_Logout_008	1
Request	Webtours_S01_ClickFlights_003	1
Request	Webtours_S01_BookFlight_004	1
Request	Webtours_S01_BookFlightSlot_005	1
Request	Webtours_S01_PaymentDetails_006	1
Request	Webtours_S02_BookAnotherButton_007	1
Request	Webtours_S01_Logout_009	1
Response data	Webtours_S01_ClickFlights_003	1
Response data	Webtours_S01_BookFlight_004	1
Response data	Webtours_S01_BookFlightSlot_005	1
Response data	Webtours_S01_PaymentDetails_006	1
Response data	Webtours_S02_BookAnotherButton_007	1
Response data	Webtours_S01_Logout_009	1
Response Body	Webtours_S01_ClickFlights_003	1
Response Headers	Webtours_S01_ClickFlights_003	1