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# JUnit with Hamcrest

Posted on [December 18, 2015](#) by [Arulkumaran Kumaraswamipillai](#)

**Q1.** What is Hamcrest, and what is its purpose?

**A1.** HAMCREST is an anagram for **MATCHER**. The purpose is to match the assertions the BDD (Behavior Driven Development) style. In short, reads better like English statements. So,

**Instead of:**

```
1
2 assertEquals(greeterService.greetings(), "Hello Wo
3
```

**with Hamcrest, reads better**

```
1
2 assertThat("Hello World", is(equalTo(Greeter.gree
3
```

where "is(...)" needs a static import of

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```

1
2 import static org.hamcrest.CoreMatchers.*;
3

```

The above reads like English: `assertThat` “actual value” is `equalTo` “expected value”.

**Q2.** What are the `CoreMatchers` class methods available for assertions?

**A2.** The **`CoreMatchers`** class has methods like

- `allOf()`
- `any()`
- `anyOf()`
- `anything()`
- `describedAs()`
- `equalTo()`
- `instanceOf()`
- `is()`
- `not()`
- `notNullValue()`
- `nullValue()`
- `sameInstance()`

**Q3.** What is the purpose of “`assertThat`” method in `org.junit.Assert` class?

**A3.** It replaces the deprecated `org.junit.Assert.assertEquals()` method, and it has the signature of

```

1
2 static <T> void assertThat(T actual, org.hamcrest
3

```

## Examples with Hamcrest

```

1 package com.mytutorial;
2
3 //Hamcrest imports
4 import static org.hamcrest.CoreMatchers.anyOf;
5 import static org.hamcrest.CoreMatchers.equalTo;
6 import static org.hamcrest.CoreMatchers.instanceOf;
7 import static org.hamcrest.CoreMatchers.is;
8 import static org.hamcrest.CoreMatchers.not;
9 import static org.hamcrest.CoreMatchers.notNullValue;
10 import static org.hamcrest.CoreMatchers.nullValue;

```

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- Transaction Managen

```

11 import static org.junit.Assert.assertThat;
12
13 //JUnit imports
14 import org.junit.Test;
15
16 public class SimpleTestsWithHamcrest {
17
18     @Test
19     public void testTwoPlusFive() {
20         assertThat(2 + 5, is(equalTo(7)));
21     }
22
23     @Test
24     public void testNull() {
25         Integer value1 = null; //actual value
26         Integer value2 = 5;   //actual value
27
28         assertThat(value1, is(nullValue(Integer.class)));
29         assertThat(value2, is(notNullValue(Integer.class)));
30     }
31
32     @Test
33     //actual value is not anyOf null, instance of
34     public void testNotNullAndInstanceOf() throws Exception {
35         String value = "John"; //actual value
36         assertThat(
37             value,
38             is(not(anyOf(nullValue(), instanceOf(String.class)))));
39     }
40 }
41
42 }

```

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