

Workshop 1 (Week 2) - Black Box Testing

The purpose of this workshop is to practice and develop an understanding of Black Box testing.

1. Concepts

- I. What relationship is there between equivalence partitions of a given program?
- II. What inputs should be chosen when performing Equivalence Partitioning?
- III. What inputs should be chosen when performing Equivalence Partitioning and Boundary Value Analysis?

2. Password Length

In a Web-based application, a password field should accept minimum 6 characters and maximum 10 characters. Apply the Equivalence Partitioning and Boundary Value Analysis techniques to test the password checking program.

3. Password Tester

Based on the documentation for the PasswordTester class (see Appendix), answer the following questions:

Considering both the return value of PasswordTester.isStrong(String) and messages it may print to standard output:

1. How many equivalence partitions would there be for this program?
2. What inputs would be required to test these partitions?
3. Implement the PasswordTester program in Java and perform black-box testing for it.

Appendix: Class PasswordTester (in JavaDoc format)

```
public class PasswordTester
extends java.lang.Object
```

• Constructor Summary

Constructors

Constructor and Description

<u>PasswordTester()</u>

• Method Summary

All MethodsStatic MethodsConcrete Methods

Modifier and Type

Method and Description

static boolean	<u>isStrong</u> (java.lang.String password) Tests the strength of a candidate password against several criteria.
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• Constructor Detail

• PasswordTester

```
public PasswordTester()
```

• Method Detail

• isStrong

```
public static boolean isStrong(java.lang.String password)
```

Tests the strength of a candidate password against several criteria. For each criteria which has not been met, a notice will be displayed via standard output.

For the purposes of this test a strong password must have at least:

- A length of 8 or more characters
- 1 lower case letter
- 1 upper case letter
- 1 number
- 1 special character from the following list: !, @, #, \$, %, ^, &, *, (,)

Parameters:

password - a password to test

Returns:

true if the password meets all of the above criteria, false otherwise.