

## Programming task assignment

Write a Python script **xuproc.py** to process the JUnit XML file. Junit file is an XML file of a given structure used for reporting test results. For XML processing, use the xml.etree—ElementTree module.

Script arguments:

xuproc.py [options] [file]

options:

- h provides the help for using the script
- j will update each test case in the XML file the following way: If there is a class name and name attribute, concatenate the class name with the name attribute with the '.' (dot) character and with the concatenated string update the name attribute. The code should prevent the accumulation of class name in the name attribute when running multiple times.

Example:

```
<testcase classname="com.howtodoinjava.junit5.examples.xmlReport.HelloTest" name="testOne"
time="0.04"/>
```

```
<testcase classname="com.howtodoinjava.junit5.examples.xmlReport.HelloTest"
name="com.howtodoinjava.junit5.examples.xmlReport.HelloTest.testOne" time="0.04"/>
```

When no options are given, the script should print the statistics about the total number of tests, failures, errors, and skipped tests in the junit file.

Other requirements

- PEP8 compatibility
- Tests of basic script functionality
- Brief user manual
- Publish the code via public git repository
  - Consider utilizing gates and CI of your git repository to test incoming patches

Example of Junit file

Unset

```
<?xml version="1.0" encoding="UTF-8"?>
<testsuite errors="0" failures="1"
name="com.howtodoinjava.junit5.examples.xmlReport.HelloTest"
skipped="0" tests="2" time="0.076" version="3.0" ...>
  <properties>
    <property name="java.specification.version" value="17"/>
```

```

        <property name="sun.cpu.isalist" value="amd64"/>
        <property name="sun.jnu.encoding" value="Cp1252"/>
        <property name="java.class.path" value="..." />
        <property name="java.vm.vendor" value="Oracle Corporation" />
        ...
    </properties>
    <testcase classname="com.howtodoinjava.junit5.examples.xmlReport.HelloTest"
name="testOne" time="0.04"/>
    <testcase classname="com.howtodoinjava.junit5.examples.xmlReport.HelloTest"
name="testTwo" time="0.008">
        <failure message="expected: &lt;true&gt; but was: &lt;false&gt;"
type="org.opentest4j.AssertionFailedError">
            <![CDATA[org.opentest4j.AssertionFailedError: expected: <true>but
was: <false>at

org.junit.jupiter.api.AssertionFailureBuilder.build(AssertionFailureBuilder.java:151)...]]
>
        </failure>
    </testcase>
</testsuite>

```