Федеральное государственное автономное образовательное учреждение высшего образования

**НАЦИОНАЛЬНЫЙ ИССЛЕДОВАТЕЛЬСКИЙ УНИВЕРСИТЕТ ИТМО**

Факультет: ПИиКТ

Направление 09.03.04 «Системное и прикладное программное обеспечение»

Мегафакультет: КТиУ

**ЛАБОРАТОРНАЯ РАБОТА №3**

по дисциплине:

«МЕТОДЫ И СРЕДСТВА ПРОГРАММНОЙ ИНЖЕНЕРИИ»

**Выполнили:**

Студенты 2 курса

группы P3215

Вариант 100

Девяткин А. Ю.

Ибадулаев А. Э. о.

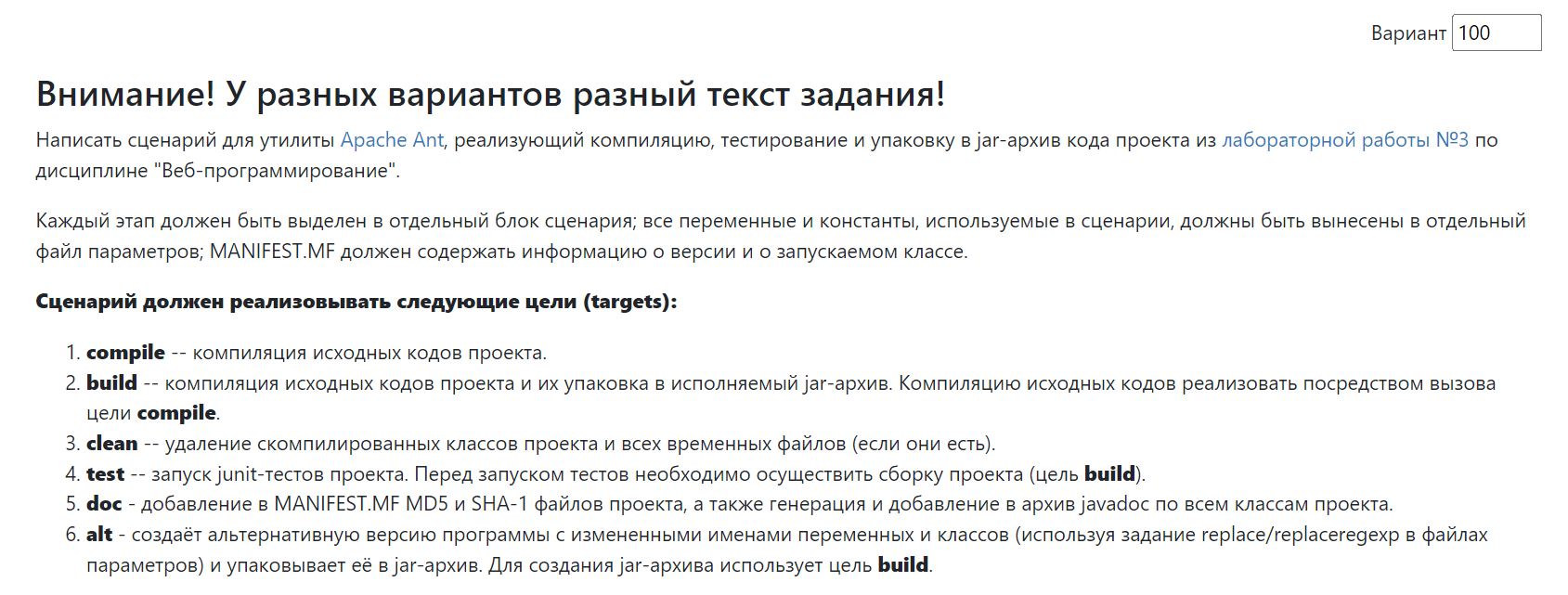
**Преподаватель:**

Покид А.В.

Санкт-Петербург

2022

# Задание



# Build.xml

<project name="web3" xmlns:ivy="antlib:org.apache.ivy.ant" default="compile">

<property file="build.properties"/>

<property name="artifactId" value="web3" />

<property name="version.release" value="1.0" />

<property name="version.snapshot" value="${version.release}-SNAPSHOT" />

<path id="target.classes.path">

<fileset dir="${target.classes.dir}">

<include name="\*"/>

</fileset>

</path>

<path id="src.java.path">

<fileset dir="${src.java.dir}">

<include name="\*.java"/>

</fileset>

</path>

<path id="lib.path">

<fileset dir="${lib.dir}">

<include name="\*.jar"/>

</fileset>

</path>

<path id="run.path">

<path refid="lib.path"/>

<path refid="src.java.path"/>

</path>

<path id="test.path">

<pathelement path="${target.classes.dir}"/>

<pathelement path="${src.test.dir}"/>

<path refid="lib.path"/>

</path>

<path id="target.test.path">

<fileset dir="${target.test.dir}">

<include name="\*"/>

</fileset>

</path>

<path id="classpath.test">

<pathelement path="${target.classes.dir}"/>

<pathelement path="${target.test.dir}"/>

<fileset dir="lib">

<include name="\*.jar"/>

</fileset>

</path>

<path id="final-target.path">

<path location="${final-target.dir}"/>

</path>

<!-- If ./lib exists than don't download one more time -->

<target name="download-lib" depends="lib.check" unless="lib.exists">

<antcall target="resolve"/>

</target>

<target name="lib.check">

<condition property="lib.exists">

<available file="${lib.dir}" type="dir"/>

</condition>

</target>

<!-- -->

<target name="build" depends="download-lib, compile-tests, compile">

<mkdir dir="${final-target.dir}"/>

<copy todir="${final-target.dir}/">

<fileset dir="${webapp.dir}"/>

</copy>

<copy todir="${final-target.dir}/WEB-INF/classes">

<fileset dir="${target.classes.dir}"/>

</copy>

<copy todir="${final-target.dir}/WEB-INF/lib">

<fileset dir="${lib.dir}"/>

</copy>

<jar destfile="${target.dir}/${jar.build}" basedir="${target.classes.dir}" compress="false" >

<manifest>

<attribute name="Main-Class"

value="web.Main"/>

</manifest>

</jar>

</target>

<target name="compile" >

<mkdir dir="${target.classes.dir}"/>

<javac srcdir="${src.java.dir}"

includes="\*\*/\*.java"

destdir="${target.classes.dir}"

includeantruntime="no"

source="1.8" target="1.8">

<classpath refid="run.path"/>

</javac>

<copy todir="${target.classes.dir}">

<fileset dir="${resources\_META-INF.dir}"/>

</copy>

</target>

<target name="resolve" description="--> retreive dependencies with ivy">

<ivy:retrieve/>

<delete file="${lib.dir}/javax.faces-2.2.0.jar"/>

<delete file="${lib.dir}/javax.faces-api-2.2.jar"/>

</target>

<target name="compile-tests" depends="compile">

<mkdir dir="${target.test.dir}"/>

<javac srcdir="${src.test.dir}" source="1.8" target="1.8"

destdir="${target.test.dir}"

includeantruntime="false">

<classpath refid="test.path"/>

</javac>

</target>

<target name="test" depends="build" description="tests to GlobalBean class">

<echo message="--- TEST START ---"/>

<junit fork="true" printsummary="on" haltonerror="on" haltonfailure="on">

<formatter type="xml"/>

<classpath refid="classpath.test"/>

<batchtest>

<fileset dir="src/test/java" includes="\*\*/\*Test.java"/>

</batchtest>

</junit>

<echo message="--- TEST DONE ---"/>

</target>

<target name="clean" description="--> clean the project">

<delete includeemptydirs="true">

<fileset dir="${basedir}">

<include name="target/\*\*"/>

</fileset>

<fileset dir="docs" erroronmissingdir="no"/>

</delete>

</target>

<property name="docs.dir" value="docs"/>

<property name="docs.generate.dir" value="${docs.dir}/docs"/>

<target name="doc" description="make documentation of project" depends="build">

<signjar jar="${target.dir}/${jar.build}"

alias="name"

storepass="password"

sigalg="MD5withRSA"

digestalg="SHA1"

keystore="keystore.jks"/>

<signjar jar="${target.dir}/${jar.build}"

alias="name"

storepass="password"

sigalg="MD5withRSA"

digestalg="MD5"

keystore="keystore.jks"/>

<javadoc sourcepath="${src.java.dir}"

destdir="${docs.generate.dir}"

author="true"

version="true"

use="true">

<classpath>

<path refid="classpath.test"/>

</classpath>

</javadoc>

<jar destfile="${target.dir}/${artifactId}-${version.snapshot}.jar"

basedir="${docs.dir}"

update="true">

</jar>

</target>

<target name="alt" description="make alternative version of project">

<replace dir="${src.java.dir}">

<replacefilter token="${class.name}" value="${alt.name}"/>

<replacefilter token="checkCircle" value="addSalt"/>

<replacefilter token="result" value="cookedBean"/>

</replace>

<rename src="${src.java.dir}/web/${class.name}.java" dest="${src.java.dir}/web/${alt.name}.java"/>

<antcall target="build"/>

<rename src="${src.java.dir}/web/${alt.name}.java" dest="${src.java.dir}/web/${class.name}.java"/>

<replace dir="${src.java.dir}">

<replacefilter token="${alt.name}" value="${class.name}"/>

<replacefilter token="addSalt" value="checkCircle"/>

<replacefilter token="cookedBean" value="result"/>

</replace>

</target>

</project>

# Вывод

В ходе выполнении лабораторной работы мы изучили основы работы с утилитой Apache Ant, а также познакомились с библиотекой JUnit.