

Massey University

159.251 Software Design and Construction

Template Engines - Velocity

Prerequisites (what you are expected to know before you come to the tutorial)

1. Be familiar with using git and maven. Be able to download from the maven repository.
2. Be familiar with how mail merge works in an office package - have a look at the following tutorials if you have never used this before: <http://goo.gl/GmHzF> for MS Office, and <http://goo.gl/DgOZQ> for OpenOffice/LibreOffice.

Objectives

1. Use the velocity template engine
2. Understand the benefits of templating

Description

Collect the skeleton code from: <https://github.com/jacobstringer/251-velocity-tutorial>. Inside, you will find:

1. A file **friends.xml** with data of a group of friends you want to invite to a party
2. A package **templatesTutorial** with classes representing **Person**, **Address** and **Gender**
3. The package **templatesTutorial** also contains two other classes you should not use directly but they are left in this package for you to inspect if you are interested:
 - a. **CreateSampleData** contains a script that is used to create friends.xml
 - b. **TestCreatedSampleData** contains test cases to verify that the test data has been generated correctly
4. Before you start, run **CreateSampleData** to regenerate friends.xml

In this package, create a script (= a class with a main method) **PrintInvitations**. This script does the following:

1. It uses the data from friends.xml to instantiate the other classes in this package.
2. It prints personalised invitations to the file **invitations.txt** (all invitations go into one file, they could be later separated by page breaks) using the Velocity template engine.

Invitation Letter Format (example for first record in the data set):

<p>To Tim McDonald 100 Main Street Palmerston North</p> <p>Dear Tim,</p> <p><i>I would like to invite you to a party this Saturday, 8PM at my place.</i></p> <p>Cheers, me</p> <p>-----</p>
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Hints

1. An XMLDecoder can be used to read the data. A brief explanation can be found here: <http://docs.oracle.com/javase/8/docs/api/java/beans/XMLDecoder.html> . Note that the object returned is an instance of List<Person>.
2. The velocity developer guide can be found here: <http://velocity.apache.org/engine//devel/developer-guide.html>
3. The velocity user guide can be found here: <http://velocity.apache.org/engine/devel/user-guide.html>
4. Velocity can be downloaded from the maven repository.

Challenge for good students

1. Format the letter generated using html markup.
2. Add a salutation depending on the gender to the address.

What to Submit

The full project zipped up along with the completed invitations.txt. Please run mvn clean before zipping to avoid object files from being transferred, and check that the zipped folder has all the relevant source code and resource files.