

MAIL MERGE

**MAKE SURE YOU READ THE DOCUMENT COMPLETELY PRIOR TO
SUBMITTING YOUR ASSIGNMET!!!**

Due:

23rd APRIL, 11:59 pm

Goal

In this assignment you are asked to design a mail merge program. "Mail merge is a process to create personalized letters and pre-addressed envelopes or mailing labels for mass mailings from a form letter" [1]. Feature works on a document that contains fixed text (that is same in each output document) and variables (which act as placeholders that are replaced by text from the data source).

Scenario and Implementation Requirements

Program will take the template and variable files as input, replace each placeholder with the corresponding value from the variable file for each student and output each to a file named as the value of the id and with a fixed extension "txt". (Example: 2008900.txt) So for sure variables file will have an attribute or element named "id" for each object, and you do not need to check the existence of it. Examples input files are given below.

Example template file: template.xml

```
<mail>
Dear Student <name/> <surname/>,
This letter is an example to inform you about the content of template file. Your student
should be <id/> and your GPA is to be <gpa/>. Thanks for reading.

Your address is: <address/>
                  <postcode/> <city/>
</mail>
```

Example variables file: variables.xml

```
<root>
  <student id="2008900">
    <name>Metem</name>
    <surname>Akdoğan</surname>
    <gpa>3,60</gpa>
    <termA>4,00</termA>
    <address>Com.Eng.Dep. No:125</address>
    <postcode>35160</postcode>
    <city>Izmir</city>
  </student>
  <student id="2008905">
    <name>aStudent</name>
    <surname>thatWillNoBeGivenAsOutput</surname>
    <termA>4,00</termA>
    <address>Com.Eng.Dep. No:125</address>
    <postcode>35160</postcode>
    <city>Izmir</city>
  </student>
</root>
```

Be careful about the following scenarios:

1. **Scenario:** Template file have a placeholder that does not exist in variables file.

Action: If not all placeholders exist in variables file that record/object will be ignored and no output will be given for it.
2. **Scenario:** Variables file have extra elements that the template file does not have placeholder for.

Action: Output the related record/object as normal, just omit the extra element.

Your program will take exactly and **only three arguments on any order**. These are arguments are:

1. The template file that contains the fixed text and placeholders for variables. This argument will be given with the flag “-t” and it can be a single file name as well as the filename with preceding path.

Example: `<-t template.xml>` or `<-t /home/user/Desktop/Assignment1/template.xml>`
2. The variables file to replace the corresponding placeholders with. This argument will be given with the flag “-v” and it can be a single file name as well as the filename with preceding path.

Example: `<-v variables.xml>` or `<-v ../Desktop/variables.xml>`
3. The folder for outputting the created documents. This argument will be given with the flag “-o” and it can be a single folder name as well as the folder name with preceding path.

Example: `<-o outputs>` or `<-o ../TestCase1/outputs>`

Usage of your program is to be exactly as (arguments may change ofcourse):

```
./mm -t tamplate.xml -v variables.xml -o ../outputs/testcase1
```

Documentation

You do not need documentation for this assignment.

Submission

This assignment will be automatically graded with test cases. So make sure your submission fully covers the following requirements, otherwise it will be graded as 0 (ZERO).

Submission will be via Google Classroom.

- Put only your (make sure no other files exist in the folder):
 - make file
 - your source file(s)in a folder named exactly as your **StudentID_Name_Surname**
(Ex:2008510900_Mete_Akdogan)
- Zip your folder and name it exactly as your **StudentID_Name_Surname.zip**
(Ex:2008510900_Mete_Akdogan.zip)
- Submit only once your zip folder. You will lose 10 points for each re-submission. So make sure every checkpoint is accomplished before you submit.
- **You may submit your assignment late with a penalty of 10 points for each day.**

Honesty

Your submissions will be scanned among each other as well as the Internet repository. We strongly encourage you not to submit your assignment rather than a dishonest submission.

Grading

Your submission will be tested with several test cases. Submission that fail all of the test cases will not be graded for coding style.

- Test cases 80%
- Coding style 20%
 - Indentation 5%
 - Naming convention 5%
 - Comments 5%
 - Modularity 5%

For Questions

For any questions about the assignment please comment under the assignment in Classroom. I will try to answer any of your questions as soon as possible, except the ones “Hocam my code does not work, can you fix it” or “I have implemented it but it does not work, can you look at it”. Search engines are far more suitable options.

References

- [1] Cambridge Dictionary Online, <http://dictionary.cambridge.org/dictionary/english/mail-merge>
Retrieved 14 May 2016.

Good Luck ☺