

# Bil334: Formal Languages and Automata

## Homework 2

Due: 2/11/2015

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### Questions

1. In this question, you will develop Perl scripts for two real-life problems. Use Perl's regular expression find-replace capabilities to develop the following programs.<sup>1</sup>

(a) (10pts)(`extract_names.pl`)

Write a perl script named `extract_names.pl` that will lessen the effort of assistants while constructing grading file. That is, if you look to Grades file under the Piazza -> Resources you will see a column containing your student IDs. We extract those IDs from the list under `http://kayit.etu.edu.tr/Ders/_Ders_prg_start.php -> Bil334 -> "Sube Listesini Goster"`. Here you can see that there exist ID,Name-Surname, Department, class, email, continuity and registration columns.You can assume that in the input file these columns will be separated by `tab` character. Hint:you can assume that only engineering students take this course.

Sample input (`input.txt`):

```
121101021 \t Jeyhun Karimov \t Bilgisayar Muhendisligi \t 5 \jkarimov@etu.edu.tr \t Evet \t Onayli
121021 \t Karimov \t Makina Muhendisligi \t 5 \karimov@etu.edu.tr \t Evet \t Onayli
```

Sample output (`output.txt`):

```
121101021
121021
```

(b) (10pts) ( `extract_files.pl`)

In this assignment you are expected to simulate the date ordering property of file explorer. For example, when you open file explorer, you can see the files under some directory ordered by date or size or type and etc. In this assignment you will be given a directory path and you are expected to give the absolute path of oldest file in that directory. You will check that if the input is valid or not. If input is not valid, you will give prompt whether quit or give another input.

Sample input (`input.txt`):

```
/Users/ceyhunkarimov/Documents/temp/
./ (assume that current directory is /Users/ceyhunkarimov/workspaces/)
```

Sample output (`output.txt`):

```
/Users/ceyhunkarimov/Documents/temp/somefile.txt
/Users/ceyhunkarimov/workspaces/somefile.zip
```

Your programs should read input file from command-line as argument and process output file in the same directory. The inputs in input file should be processed line by line. So, every input is separated from others by newline character. You can assume that Turkish characters will not be used. As file system relative or absolute path standards, Unix will be considered. So, you can assume that the input is valid if and only if it produces no error while typing on command line of Unix machine. For

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<sup>1</sup>If you want, you can use Python instead of Perl.

further reading you can consider [https://en.wikipedia.org/wiki/Filesystem\\_Hierarchy\\_Standard](https://en.wikipedia.org/wiki/Filesystem_Hierarchy_Standard). In order to submit your homework, first zip your source files with name "yourID.zip" (123456789.zip) and send it to jkarimov@etu.edu.tr with subject [Bil334-HW2-yourID]. Late submission policy is restricted to two days after deadline with 10% penalty for each day.

May it be easy.