

SIT323 Practical Software Development, Trimester 2, 2018

Week 3 – Practical 2

Validation

Introduction

This practical will focus on validation.

Tasks

1. The validity of each of the files Test2.czl, Test2.cfg and Test2.seq is clearly indicated on page 9 of the assignment document **Assessment Task 1.pdf**. The validity of the crozzle is also indicated on that page.

What are the 3 issues with that crozzle?

- You should be able to determine 2 of these issues by comparing the czl and cfg files. But the third issue can be very difficult to determine by comparing these 2 files.
- You should be able to determine the third issue by placing the letter sequences of the czl file into a 2D grid, and then comparing that grid and particular values in the cfg file.

You can use pen and paper or a spreadsheet to create and populate your 2D grid.

For example, the first 2 horizontal letter sequences and the first 2 vertical letter sequences from Test2.czl would be placed into a grid as depicted in Figure 1. You will need to place all letter sequences into a grid to determine the third issue.

	R	O	B	E	R	T				O	S	C	A	R
			I											
	J		L											
	E		L											
	S													
	S													
	I													
	C													
	A													

Figure 1.

2. The following CSV data represents values of a seq file, assume that it is valid. The header is on the first line. Letter sequence data are on lines 2 to 5.

```
"[a-zA-Z]{2,}" , 40 , 15 , 1296 , 1351
ALAN , 10 , 4 , 284 , 298
Alan , 10 , 4 , 380 , 394
BEN , 10 , 3 , 213 , 226
bill , 10 , 4 , 419 , 433
```

- What is the actual value of the 1st field in the header?
 - How would you determine whether the values in the 2nd, 3rd, 4th and 5th fields of the header are correct?
 - For any possible group of letter sequence data, what is the possible range of values for the 2nd field of the header?
 - For any possible group of letter sequence data, what is the possible range of values for the 3rd field of the header?
 - For any possible group of letter sequence data, what is the possible range of values for the 4th field of the header?
 - Is it possible that the 5th field in the header can be a negative value?
3. The following CSV data represents values of a seq file, assume that it is valid. The header is on the first line. Letter sequence data are on lines 2 and 3.

```
"[A-Z]{3,}" , 20 , 8 , 580 , 608
JACK , 10 , 4 , 281 , 295
JILL , 10 , 4 , 299 , 313
```

- What is meaning of the regular expression in the 1st field of the header?
- What is an appropriate data type for the 2nd field of the data lines (i.e., non-header lines)?
- For any possible letter sequence, what is the possible range of values for the 2nd field of the data lines?
- For any possible letter sequence, what is the possible range of values for the 3rd field of the data lines?
- For this particular header, what is the minimum possible value for the 3rd field of the data lines?
- For this particular header, what is the minimum possible value for the 4th field of the data lines?
- How would you determine whether the values in the 3rd, 4th and 5th fields of the data lines are correct?

4. The following CSV data represents values of a seq file. The header is on the first line. Letter sequence data are on lines 2 to 5.

```
"[A-Z]{4,}" , 40 , 22 , 1624 , 1686
ANGELA , 10 , 7 , 424 , 440
BENNY , 10 , 5 , 394 , 409
CAMERON , 10 , 7 , 517 , 534
RED , 10 , 4 , 289 , 303
```

Assume there are no errors in the header. What are the errors in this seq file?

5. Using the "Old Program":
- Which class and method is used to validate an old configuration file?
 - Which class and method is used to validate an old word list file?
 - Which class and method is used to validate an old crozzle file?
 - Which class and method is used to validate a crozzle?
 - Which file type (configuration, word list or crozzle) is validated first?
 - Which file type (configuration, word list or crozzle) is validated second?
 - Which file type (configuration, word list or crozzle) is validated third?
6. An old configuration file contains many keywords. Where are these keywords declared within the Old Program? Give the class name and region as your answer.
7. An old crozzle file contains many keywords. Where are these keywords declared within the Old Program? Give the class name and region as your answer.
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