

## Homework #7 Due May 24

1. Linz- Section 8.1: 5, 7 (j),(k), 8 (c ), (d), (f)  
8.2: 10

2. Show that the language

$$L = \{a^n b^n : n \geq 1\} \cup \{a^{n+2} b^n : n \geq 1\}$$

is deterministic context-free by constructing a dpda for it. Give arguments that your pda is in fact deterministic.

3. Construct a Turing machine that accepts the language

$$L = \{a^n b^n c^n : n \geq 1\}.$$

Please submit JFLAP files for problems 2 and 3.

For example, if you're submitting the file "problem\_3.jff"’s, use the following command on your CSIF account:

```
> handin shini hw7 problem_3.jff
```