TDT4205 Compilers

Exercise 1

Stian Hvatum (hvatum)
MTDT

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Task 1

Version info of *gcc*, *flex* and *bison*

- gcc (GCC) 4.2.3 (Ubuntu 4.2.3-2ubuntu7)
- flex 2.5.34
- bison (GNU Bison) 2.3

Task 2

A lexical analyzer is a program that accepts the source code of a program as a stream of characters, and identifying them as lexemes and outputs this as tokens.

An acceptor "accepts" the token stream generated by the lexical analyzer and desides if it satisfies the syntax of the programming language.

Task 3

3.1

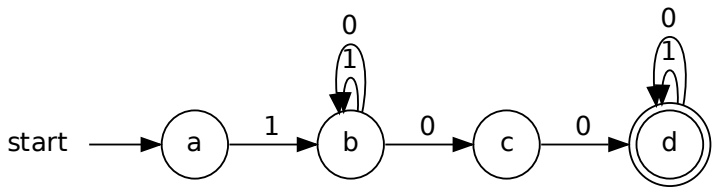

Figure 1: NDF for 1(0—1)*00(0—1)*

3.2

This language includes:

- The word 100
- All words starting with 100
- All words starting with 1 and ending with 00
- All words starting with 1 and containing 00

given the alphabeth is the set of 0 1
Examples are

- 11111111111111111001111111111111111111
- 1001111111111111111111
- 10011001100110011001
- 10001

3.3

	a	b	c	d
1	b	b	-	d
0	-	{b c}	d	d

Figure 2: Transition table for 1(0—1)*00(0—1)*

Task 4

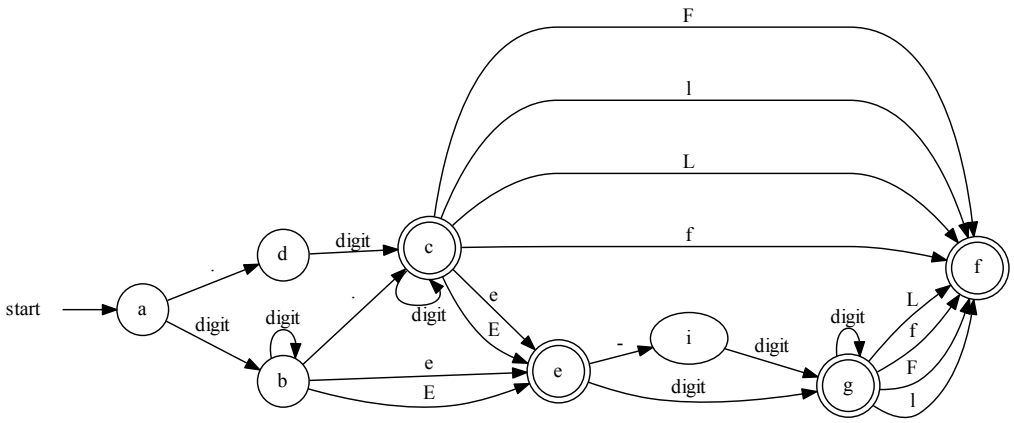

Figure 3: DFA for float