

EXAM REPORT

Advanced Programming 2013

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ACRONYMS

INTRODUCTION

1 SALSA LANGUAGE PARSER

1.1 *Choice of Parser Library*

1.2 *Grammar Transformations*

2 SALSA LANGUAGE INTERPRETER

3 ATOMIC TRANSACTION SERVER

4 CONCLUSION

A SALSA GRAMMAR

B LEXICAL SPECIFICATION

C SUBMITTED FILES

Sample programs; example ?? shows how to compile and run a sample program.

Listing 1: File tree under src/

```
1 .
2 |-- examples
3 |   |-- id.class
4 |   |-- id.ial
5 |   |-- id.java
6 |   |-- id2.class
7 |   |-- id2.ial
8 |   |-- id2.java
9 |   |-- optimized.ial
10 |  |-- optimized.java
11 |  |-- plus.class
12 |  |-- plus.ial
```

Definition 1: Syntax of target language

<i>Program</i>	::=	<i>DefComs</i>
<i>DefComs</i>	::=	<i>DefCom</i>
		<i>DefCom DefComs</i>
<i>DefCom</i>	::=	<i>Command</i>
		<i>Definition</i>
<i>Definition</i>	::=	'viewdef' <i>VIdent Expr Expr</i>
		'rectangle' <i>SIdent Expr Expr Expr Expr Colour</i>
		'circle' <i>SIdent Expr Expr Expr Colour</i>
		'view' <i>VIdent</i>
		'group' <i>VIdent '[' VIdents ']'</i>
<i>Command</i>	::=	<i>SIdents</i> '->' <i>Pos</i>
		<i>Command</i> '@' <i>VIdent</i>
		<i>Command</i> ' ' <i>Command</i>
		'{' <i>Command</i> '}'
<i>VIdents</i>	::=	<i>VIdent</i>
		<i>VIdent VIdents</i>
<i>SIdents</i>	::=	<i>SIdent</i>
		<i>SIdent SIdents</i>
<i>Pos</i>	::=	'(' <i>Expr</i> ',' <i>Expr</i> ')'
		'+' '(' <i>Expr</i> ',' <i>Expr</i> ')'
<i>Expr</i>	::=	<i>Prim</i>
		<i>Expr</i> '+' <i>Prim</i>
		<i>Expr</i> '-' <i>Prim</i>
<i>Prim</i>	::=	integer
		<i>SIdent</i> '.' 'x'
		<i>SIdent</i> '.' 'y'
		'(' <i>Expr</i> ')'
<i>Colour</i>	::=	'blue' 'plum' 'red' 'green' 'orange'
