

## CIS\*4650 (Winter 2021) --- Marking Scheme for Checkpoint One

Group	Questions	Comments
	Documentation (20)	
	Scanner (20): 1. Major token types: 2. Row/Column Numbers: 3. Using JFlex:	
	Parser (40): 1. Parsing w/o Output: 2. Generating AST's: 3. Using CUP:	
	Error Recovery (20): 1. Basic Reporting: 2. Major Components: 3. Extensive Recovery:	

<p>Scanner:</p> <ol style="list-style-type: none"> <li>1. Major token types: keywords, symbols, white spaces, identifiers, numbers, comments, and invalid characters.</li> <li>2. Row/column numbers: required for error reporting</li> <li>3. Must use the JFlex tool</li> </ol>	<ul style="list-style-type: none"> <li>- Run fac.cm</li> <li>- Check *.flex file to verify the use of a scanner tool.</li> </ul>
<p>Parser:</p> <ol style="list-style-type: none"> <li>1. Parse w/o output</li> <li>2. Generate abstract syntax trees</li> <li>3. Must use the CUP tool</li> </ol>	<ul style="list-style-type: none"> <li>- Run fac.cm, gcd.cm, and sort.cm</li> <li>- Check abstract syntax trees for these programs</li> <li>- Verify the tree is displayed after being completely built</li> <li>- Check *.cup file to verify the use of a parser tool</li> </ul>
<p>Error Recovery:</p> <ol style="list-style-type: none"> <li>1. Basic reporting: first error token with type, value, and row number.</li> <li>2. Major components: recover with dec sequence, exp sequence, and expressions with multiple binary operations</li> <li>3. Extensive recovery: recover with other syntactic structures.</li> </ol>	<ul style="list-style-type: none"> <li>- Introduce errors in some of the test files and verify the results.</li> </ul>