

CIS*4650 (Winter 2025) --- 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"> 1. Major token types: keywords, symbols, white spaces, identifiers, numbers, comments, and invalid characters. 2. Row/column numbers: required for error reporting 3. Must use the JFlex tool 	<ul style="list-style-type: none"> - Run fac.cm - Check *.flex file to verify the use of a scanner tool.
<p>Parser:</p> <ol style="list-style-type: none"> 1. Parse w/o output 2. Generate abstract syntax trees 3. Must use the CUP tool 	<ul style="list-style-type: none"> - Run fac.cm, booltest.cm, gcd.cm, sort.cm, and mutual.com - Check abstract syntax trees for these programs - Verify the tree is displayed after being completely built - Check *.cup file to verify the use of a parser tool
<p>Error Recovery:</p> <ol style="list-style-type: none"> 1. Basic reporting: first error token with type, value, and row number. 2. Major components: recover with dec sequence, exp sequence, and expressions with multiple binary operations 3. Extensive recovery: recover with other syntactic structures. 	<ul style="list-style-type: none"> - Introduce errors in some of the test files and verify the results.