Final Exam - 200 points

1. **Semantic Analysis** — 50 points
   Assuming static scope, draw the symbol table for this code. Then describe the process of scope and type checking using this code as an example.

2. **Static and Dynamic Scope** — 50 points
   Given the code on the right, show the output when run under static scope. Then show the output when run under dynamic scope.

3. **Shift-Reduce Parsing** — 25 points

4. **Type Systems** — 25 points

5. **Code Generation** — 50 points