**Probal Chandra Dhar**

**Advanced Programming Languages**

**Project 1**

**Correspondence of Rules to Code in Recursive Descent Parsers**

<program> ::= begin <stmtlist> end;

<stmtlist> ::= <stml>;<stmtlist> | ε

<stmt> ::= <declaration> | <selector> | <iterator> | <expr> | <assign\_stmt>

<declaration> ::= <type><variable> | <type><assign\_stmt>

<type> ::= int

<selector> ::= if <stmtlist> endif

<iterator> ::= while <stmtlist> endwhile

<assign\_stmt> ::= <variable> = <expr>

<expr> ::= <term> | <exp\_tail>

<exp\_tail> ::= <expr> | +<term> | -<term> | =<term> | < <term> | > <term> |

<comparison> <term> | ε

<term> ::= <factor><fact\_tail>

<fact\_tail> ::= <term> | \* <factor> | /<factor> | ε

<comparison> ::= == | += | -= | >= | <= | !=

<factor> ::= <variable> | <number> | <expr> | ε

<variable> ::= <letter> | <variable\_tail>

<variable\_tail> ::= <alnum> | <end\_seq> | ε

<end\_seq> ::= <alnum><end\_seq> | <underscore\_seq><end\_seq> | ε

<underscore\_seq> ::= \_<alnum>

<alnum> ::= <letter> | <digit>