**Probal Chandra Dhar**

**Advanced Programming Languages**

**Project 3**

**Correspondence of Rules to Code in left-recursive format for a LR parser**

<program> ::= begin <stmt> end

<stmt> ::= <stmt><selector>

| <stmt><iterator>

| <stmt><assignment>

| <stmt><declaration>

| error

| ε

<expr> ::= <expr> \* <expr>

| <expr> / <expr>

| <expr> + <expr>

| <expr> - <expr>

| ( <expr> )

| <number>

| <identifier>

<selector> ::= if (<condStmt>) <stmt> endif

| if (<condStmt>) <stmt> else <stmt> endif

<iterator> ::= while (<condStmt>) <stmt> endwhile

<assignment> ::= <identifier> = <expr>;

<condStmt> ::= <identifier><comparison><expr>

<declaration> ::= <type><identifier>;

<type> ::= int

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

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

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

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

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

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