

Recursive Descent

- if i = 1 -> write i; fi ;

<stmt> • if #startif <bool> -> #iftest <stmtlist> fi #endif ;

match (if)

startif

bool

match(then)

iftest

stmtlist

match(fi)

endif

match(semicolon)

Recursive Descent

if • i = 1 -> write i; fi ;

<stmt> if • #startif <bool> -> #iftest <stmtlist> fi #endif ;

...

startif

bool

match(then)

iftest

stmtlist

match(fi)

endif

match(semicolon)

Recursive Descent

if • i = 1 -> write i; fi ;

<stmt> if #startif • <bool> -> #iftest <stmtlist> fi #endif ;

...

Label 4

bool

match(then)

iftest

stmtlist

match(fi)

endif

match(semicolon)

Recursive Descent

if • i = 1 -> write i; fi ;

<bool> • <expr> <relop> <expr> #genbool

expr

relop

expr

genbool

Recursive Descent

if $i \bullet = 1$ \rightarrow write i ; f_i ;

$\langle \text{bool} \rangle$ $\langle \text{expr} \rangle \bullet \langle \text{relop} \rangle \langle \text{expr} \rangle \# \text{genbool}$

Expr Rec
Var, i

relop

expr

genbool

Recursive Descent

if $i = \bullet 1$ \rightarrow write i ; fi ;

$\langle \text{bool} \rangle$ $\langle \text{expr} \rangle$ $\langle \text{relop} \rangle \bullet \langle \text{expr} \rangle$ #genbool

Expr Rec
Var, i

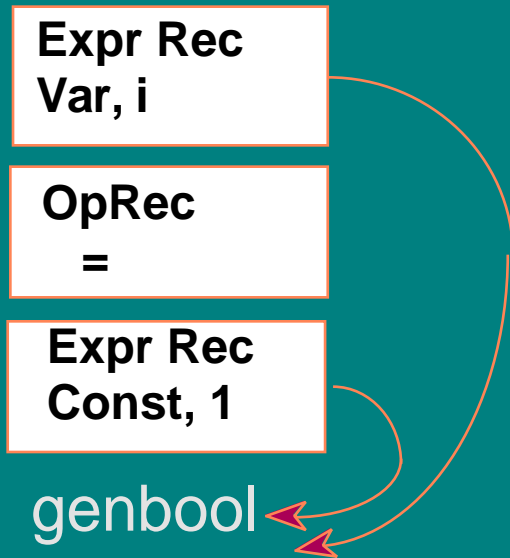
OpRec
=

expr
genbool

Recursive Descent

if $i = 1$ • \rightarrow write i ; f_i ;

$\langle \text{bool} \rangle$ $\langle \text{expr} \rangle$ $\langle \text{relop} \rangle$ $\langle \text{expr} \rangle$ • #genbool



Recursive Descent

if i = 1 • -> write i; fi ;

<bool> <expr> <relop> <expr> • #genbool

Expr Rec
Var, i

Expr Rec
Const, 1

gen2(load
gen2(ic

LD R0, \$\$
IC R0, #1

Recursive Descent

if i = 1 • -> write i; fi ;

<bool> <expr> <relop> <expr> #genbool •

Expr Rec
Var, i

OpRec
=

Expr Rec
Const, 1

LD R0, \$\$
IC R0, #1



Recursive Descent

if i = 1 • -> write i; fi ;

<stmt> if #startif <bool> • -> #iftest <stmtlist> fi #endif ;

Label 4

OpRec

=

LD R0, \$I\$

IC R0, #1

match(then)

iftest

stmtlist

match(fi)

endif

match(semicolon)

Recursive Descent

if i = 1 -> • write i; fi ;

<stmt> if #startif <bool> -> •#iftest <stmtlist> fi #endif ;

Label 4

OpRec
=

LD R0, \$I\$
IC R0, #1

iftest

stmtlist

match(fi)

endif

match(semicolon)

Recursive Descent

if i = 1 -> • write i; fi ;

<stmt> if #startif <bool> -> •#iftest <stmtlist> fi #endif ;

Label 4

OpRec
=

LD R0, \$I\$
IC R0, #1
JNE L4

gen2(JNE

Recursive Descent

if i = 1 -> • write i; fi ;

<stmt> if #startif <bool> -> #iftest • <stmtlist> fi #endif ;

Label 4

OpRec

=

```
LD R0, $$  
IC R0, #1  
JNE L4
```

stmtlist

match(fi)

endif

match(semicolon)

Recursive Descent

if i = 1 -> write i ; • fi ;

<stmt> if #startif <bool> -> #iftest <stmtlist> • fi #endif ;

Label 4

OpRec

=

LD R0, \$i\$

IC R0, #1

JNE L4

WRI \$i\$

match(fi)

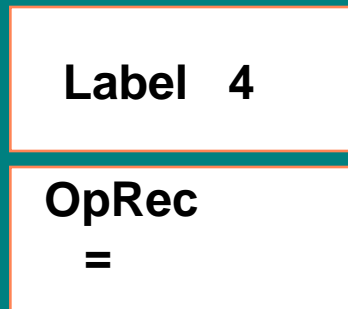
endif

match(semicolon)

Recursive Descent

if i = 1 -> write i ; fi • ;

<stmt> if #startif <bool> -> #iftest <stmtlist> fi • #endif ;



```
LD R0, $i$  
IC R0, #1  
JNE L4  
WRI $i$
```

endif
match(semicolon)

Recursive Descent

if i = 1 -> write i; fi • ;

<stmt> if #startif <bool> -> #iftest <stmtlist> fi • #endif ;

Label 4

```
LD R0, $i$  
IC R0, #1  
JNE L4  
WRI $i$  
LABEL L4
```

GenLabel(

Recursive Descent

if i = 1 -> write i ; fi • ;

<stmt> if #startif <bool> -> #iftest <stmtlist> fi #endif • ;

Label 4

OpRec

=

```
LD R0, $i$  
IC R0, #1  
JNE L4  
WRI $i$  
LABEL L4
```

match(semicolon)