

Shift Reduce again.

(f1)

```
if a < b then while b > 10 do b = b - a ;
if id < b then while b > 10 do b = b - a ;
if simp < b then while b > 10 do b = b - a ;
if simp op b then while b > 10 do b = b - a ;
if simp op id then while b > 10 do b = b - a ;
if simp op simp then while b > 10 do b = b - a ;
if expr then while b > 10 do b = b - a ;
if expr then while id > 10 do b = b - a ;
if expr then while simp > 10 do b = b - a ;
if expr then while simp op 10 do b = b - a ;
if expr then while simp op num do b = b - a ;
if expr then while simp op simp do b = b - a ;
if expr then while expr do b = b - a ;
if expr then while expr do id = b - a ;
if expr then while expr do id = id - a ;
if expr then while expr do id = simp - a ;
if expr then while expr do id = simp op a ;
if expr then while expr do id = simp op id ;
if expr then while expr do id = simp op simp ;
if expr then while expr do id = expr ;
if expr then while expr do stmt
if expr then stmt
stmt
```

```

          stmt
if  expr  then          stmt
if  expr  then while   expr  do    stmt
if  expr  then while   expr  do id =  expr  ;
if  expr  then while   expr  do id = simp op simp ;
if  expr  then while   expr  do id = simp op id  ;
if  expr  then while   expr  do id = simp op a   ;
if  expr  then while   expr  do id = simp - a   ;
if  expr  then while   expr  do id = id  - a   ;
if  expr  then while   expr  do id = b   - a   ;
if  expr  then while   expr  do b = b   - a   ;
if  expr  then while simp op simp do b = b   - a   ;
if  expr  then while simp op num do b = b   - a   ;
if  expr  then while simp op 10 do b = b   - a   ;
if  expr  then while simp > 10 do b = b   - a   ;
if  expr  then while id > 10 do b = b   - a   ;
if  expr  then while b > 10 do b = b   - a   ;
if simp op simp then while b > 10 do b = b   - a   ;
if simp op id then while b > 10 do b = b   - a   ;
if simp op b then while b > 10 do b = b   - a   ;
if simp < b then while b > 10 do b = b   - a   ;
if id < b then while b > 10 do b = b   - a   ;
if a < b then while b > 10 do b = b   - a   ;

```


(f4)

```
stmt
if-expr-then-stmt
while-expr-do-stmt
id-equals-expr
  simp-op-simp
    id
    a
    -
    id
    b
  b
simp-op-simp
  num
  10
  >
  id
  b
simp-op-simp
  id
  b
  <
  id
  a
```

```
stmt
if-expr-then-stmt
while-expr-do-stmt
id-equals-expr
  simp-op-simp
    id
    a
    -
    id
    b
  b
  simp-op-simp
    num
    10
  >
  id
  b
simp-op-simp
  id
  b
  <
  id
  a
```