```
Coq <
Coq < Inductive RULERG (MS : GmethPost) (MI : GmethInv ) : Gstmt -> Gassertion -> Prop :=
      | AffectRuleRG : forall
                               x e (post : Gassertion) ,
           (forall (s1 s2: state) (g1 g2: gState), s2 = update s1 x (eval_expr s1 e) \rightarrow g1 = g2
Coq <
          RULERG MS MI (GAffect x e) post
Coq <
Coq <
Coq <
      | IfRuleRG : forall
                            (e : expr) (stmtT stmtF: Gstmt ) ( post1 post2 post : Gassertion) ,
Coq <
          ( forall ( s1 s2: state) (g1 g2 : gState ) event, ( (not (eval_expr s1 e = 0)) -> post1
                                                (eval_expr s1 e = 0 -> post2 s1 g1 event s2 g2 )
Coq <
Coq <
Coq <
          RULERG MS MI stmtT
                              post1
Coq <
          RULERG MS MI stmtF
                              post2
Coq <
Coq <
          RULERG MS MI (GIf e stmtT stmtF) post
Coq <
      | WhileRuleRG : forall
                              (st : Gstmt ) ( post post1 : Gassertion) e ( inv : Gassertion)
Coq <
Coq <
           (forall s1 s2 g1 g2 event, post1 s1 g1 event s2 g2 -> post s1 g1 event s2 g2) ->
Coq <
           (* ( forall s p t event1 event2, eval_expr s e \Leftrightarrow 0 \rightarrow inv s event1 p \rightarrow post1 p event2
Coq <
                                                                ) ->
Coq <
           (forall s g, eval_expr s e = 0 -> post1 s g nil s g
Coq <
          RULERG MS MI st post1
Coq <
          RULETG MS st inv ->
Coq <
           (forall s1 s2 s3 g1 g2 g3 e1 e2, ( inv s1 g1 e1 s2 g2 -> eval_expr s1 e <> 0 -> pos
Coq <
          RULERG MS MI (GWhile e st) post
Coq <
Coq <
      | SeqRuleRG : forall (stmt1 stmt2: Gstmt ) (post post1 postT postRst2 : Gassertion),
Coq <
Coq <
       (forall s1 s2 e g1 g2, (post1 s1 g1 e s2 g2 -> post s1 g1 e s2 g2)) ->
         (forall s1 s2 s3 e1 e2 g1 g2 g3, postT s1 g1 e1 s2 g2 -> postRst2 s2 g2 e2 s3 g3 -> pos
Coq <
        RULERG MS MI stmt1 post1 ->
Coq <
        RULETG MS stmt1 postT ->
Coq <
Coq <
        RULERG MS MI stmt2 postRst2
Coq <
        RULERG MS MI (GSseq stmt1 stmt2) post
Coq <
Coq <
                      forall (post: Gassertion),
         ( forall (s1 s2: state ) g1 g2 , s1 = s2 -> g1 = g2 -> post s1 g1 nil s2 g2 ) ->
Coq <
        RULERG MS MI GSkip post
Coq <
Coq <
      | SetRuleG : forall x e (post : Gassertion) ,
Coq <
           (forall (s1 s2: state) (g1 g2: gState), g2 = gUpdate g1 x (gEval_expr s1 g1 e) ->
Coq <
Coq <
          RULERG MS MI (GSet x e) post
Coq <
Coq <
      | CallRuleRG : forall ( mName : methodNames ) ( post : Gassertion ) ,
Coq <
Coq <
         (forall (s1 s2 : state ) event g1 g2, ( MI mName ) s1 g1 event s2 g2 -> post s1 g1 eve
Coq <
        RULERG MS MI (GCall mName ) post
Coq <
```

: Gassertion) event,

(forall (s1 s2: state) g1 g2, s1 = s2 \rightarrow g1 = g2 \rightarrow post s1 g1 (event :: nil) s2 g2

(post

Coq < | SignalRuleRG : forall</pre>

Coq <

```
Coq < RULERG MS MI (GSignal event) post.

Toplevel input, characters 2614-2615

> (forall (s1 s2: state) g1 g2, s1 = s2 -> g1 = g2 -> post s1 g1 (event :: nil) s2 g2) ->

> Syntax error: [constr:binder_constr] or [constr:operconstr] expected after ':' (in [constr:operconstr])
```