```
4
     // extract information of the security rule
 5
      [% var sign:String; var nodeList:String; var relationshipList:String;
 6
        var fieldList:String; var roleList:String; var action:String; %]
 7
     // sign
     [% if(sr.sign.equals('+')) sign="GRANT" %]
 8
      [% if(sr.sign.equals('-')) sign="DENY" %]
 9
10
     // elements
      [% for(e in sr.elements) %]
11
       [% if(e.isKindOf(Node)) nodeList = nodeList + e.name + ',' %]
12
       [% if(e.isKindOf(Relationship)) relationshipList = relationshipList +
13
14
         e.name + ',' %]
      // roles
15
       [% for(r in sr.roles) roleList = roleList + r.name + ',' %]
16
      // for each privilege
17
       [% for(p in sr.privileges) %]
18
        [% if(p.equals('Read')) action="MATCH" %]
19
        [% if(p.equals('Create')) action="CREATE" %]
20
        [% if(p.equals('Delete')) action="DELETE" %]
21
        [% if(p.equals('Update')) action="SET PROPERTY {*}" %]
22
23
24
       // security privilege
        [% if(sr.isKindOf(SecurityRuleElement)) %]
25
26
         [%= sign %] [%= action %] ON GRAPHS [%= db.name %]
           NODES [%= nodeList %] TO [%= roleList %]
27
         [%= sign %] [%= action %] ON GRAPHS [%= db.name %]
28
29
           RELATIONSHIPS [%= relationshipList %] TO [%= roleList %]
30
       // fine grain security privilege
31
32
        [% if(sr.isKindOf(SecurityRuleField)) %]
         [% for(f in sr.fields) %]
33
34
          [% if(f.element.isKindOf(Node)) %]
35
           [%= sign %] [%= action %] { [%= f.name %] } ON GRAPHS [%= db.name %]
             NODES [%= f.element %] TO [%= roleList %]
36
          [% if(f.element.isKindOf(Relationship)) %]
37
           [%= sign %] [%= action %] { [%= f.name %] } ON GRAPHS [%= db.name %]
38
39
             RELATIONSHIPS [%= f.element %] TO [%= roleList %]
```

[% for(db in graph!Database) %]

[% for(sr in db.rules) %]

1

2