Rebecca Frederick EECS 345 Written Exercise 1 February 1, 2016

```
1. \langle C \rangle \rightarrow \langle V \rangle = \langle D \rangle | \langle V \rangle
             \rightarrow x | y | z
      <V>
              \rightarrow <E> ? <D> : <D> \mid <E>
      <D>
      <E>

ightarrow <E> || <F> | <F>

ightarrow <F> && <G> \mid <G>
      <F>
                     !<G> | <H>
      <G>
              \rightarrow
                     (<H>) <I>
      <H>
      <I>

ightarrow true | false
```

2. Static Semantic Attributes:

Attribute Rules:

```
<start1>.type :=
<start1>.typetable(<var>) :=
<start1>.inittable(<var>) :=
<start1>.typebinding :=
<start1>.initialized :=
<start2>.type :=
<start2>.typetable(<var>) :=
<start2>.inittable(<var>) :=
<start2>.typebinding :=
<start2>.initialized :=
<stmt<sub>1</sub>>.type :=
<stmt1>.typetable(<var>) :=
<stmt<sub>1</sub>>.inittable(<var>) :=
<stmt<sub>1</sub>>.typebinding :=
{\rm <stmt_1>.initialized} :=
<stmt<sub>2</sub>>.type :=
<stmt2>.typetable(<var>) :=
<stmt<sub>2</sub>>.inittable(<var>) :=
<stmt<sub>2</sub>>.typebinding :=
<stmt2>.initialized :=
<declare1>.type :=
<declare<sub>1</sub>>.typetable(<var>) :=
<declare<sub>1</sub>>.inittable(<var>) :=
```

```
<declare1>.typebinding :=
<declare<sub>1</sub>>.initialized :=
<type<sub>1</sub>>.type :=
<type<sub>1</sub>>.typetable(<var>) :=
<type<sub>1</sub>>.inittable(<var>) :=
<type1>.typebinding :=
<type1>.initialized :=
<type<sub>2</sub>>.type :=
<type<sub>2</sub>>.typetable(<var>) :=
<type<sub>2</sub>>.inittable(<var>) :=
<type2>.typebinding :=
<type2>.initialized :=
<assign1>.type :=
<assign<sub>1</sub>>.typetable(<var>) :=
<assign<sub>1</sub>>.inittable(<var>) :=
{assign_1}:
{assign_1}:initialized :=
<expression_1>.type :=
<expression<sub>1</sub>>.typetable(<var>) :=
<expression<sub>1</sub>>.inittable(<var>) :=
<expression<sub>1</sub>>.typebinding :=
<expression1>.initialized :=
<expression_2>.type :=
<expression<sub>2</sub>>.typetable(<var>) :=
<expression<sub>2</sub>>.inittable(<var>) :=
<expression_2>.typebinding :=
<expression_2>.initialized :=
<value1>.type :=
<value<sub>1</sub>>.typetable(<var>) :=
<value<sub>1</sub>>.inittable(<var>) :=
<value<sub>1</sub>>.typebinding :=
<value<sub>1</sub>>.initialized :=
<value<sub>2</sub>>.type :=
<value<sub>2</sub>>.typetable(<var>) :=
<value<sub>2</sub>>.inittable(<var>) :=
<value2>.typebinding :=
<value<sub>2</sub>>.initialized :=
<value<sub>3</sub>>.type :=
<value3>.typetable(<var>) :=
<value<sub>3</sub>>.inittable(<var>) :=
<value3>.typebinding :=
<value3>.initialized :=
```

Table 1: Attribute Rules

3. asdf

- 4. asdf
- 5. asdf