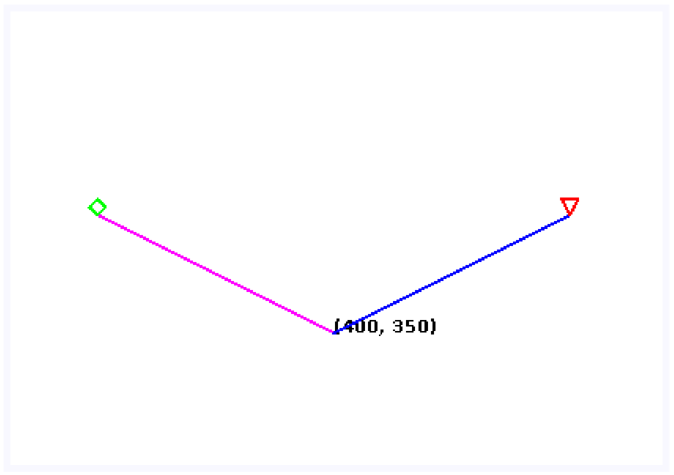
Model 1 The “Vee” Tree

Open *VeeTree.java* and run the program. Adjust the `DELAY` in *Drawing.java*, as needed, to notice the order. Then answer the questions below to explore and discuss the source code as a team.

Drawing (cropped)



Console output

```
Starting vee(400, 350)
diamond(250, 275)
triangle(550, 275)
Finished vee(400, 350)
```

Questions (15 min) **Start time:**

1. The `vee()` method uses g2 to draw strings and lines. Where is this variable declared?

2. Review the Javadoc comment for the `vee()` method. In terms of its variables, what are the following coordinates?

a) The bottom of the “Vee”: (,)

b) The diamond on the left: (,)

c) The triangle on the right: (,)

3. Add the following line at the end of the left branch, after the `trace` for diamond. What happens when you run the program now? Explain both the drawing and the Console output.

```
vee(level + 1, left, top);
```

4. Add the following code at the beginning of the method, right after the first `trace`. What happens when you run the program now? Explain both the drawing and the Console output.

```
if (level == 3) {
    trace(level, "Aborting vee(%d, %d)", x, y);
    return;
}
```

5. Based on the most recent Console output:

a) How many times was `vee()` called?

b) How many times did `vee()` return?

c) How many diamonds were drawn?

d) How many triangles were drawn?

6. Add the following line at the end of the right branch, after the `trace` for triangle. What happens when you run the program now? Explain both the drawing and the Console output.

```
vee(level + 1, right, top);
```