Please find below the set of algebraic equations for the flattened fibonacci_gen CBD:

$$
\begin{cases}
var(b.O_1) &= var(a.I_C) \\
var(c.O_1) &= var(a.I_1) \\
var(e.O_1) &= var(d.I_C) \\
var(a.O_1) &= var(d.I_1) \\
var(g.O_1) &= var(f.I_C) \\
var(c.O_1) &= var(f.I_1) \\
var(a.O_1) &= var(c.I_1) \\
var(d.O_1) &= var(c.I_2) \\
var(i.O_1) &= var(j.I_1) \\
var(k.O_1) &= var(j.I_2) \\
var(j.O_1) &= var(l.I_1) \\
var(m.O_1) &= var(l.I_2) \\
var(j.O_1) &= var(k.I_1) \\
var(h.O_1) &= var(m.I_1) \\
var(h.O_1) &= var(n.I_1) \\
var(i.O_1) &= var(n.I_2) \\
var(j.O_1) &= var(b.I_1) \\
var(l.O_1) &= var(e.I_1) \\
var(n.O_1) &= var(g.I_1) \\
var(f.O_1) &= var(o.I_1) \\
var(c.O_1) &= var(c.I_1) + var(c.I_2) \\
var(h.O_1) &= 1.0 \\
var(i.O_1) &= 2.0 \\
var(j.O_1) &= var(j.I_1) + var(j.I_2) \\
var(l.O_1) &= var(l.I_1) + var(l.I_2) \\
var(k.O_1) &= -var(k.I_1) \\
var(m.O_1) &= -var(m.I_1) \\
var(n.O_1) &= \sqrt[var(n.I_2)]{var(n.I_1)}
\end{cases}
$$

Given:

- Block **D1** is represented by variable **a**
- Block **conditions.OUT1** is represented by variable **b**
- Block **sum** is represented by variable **c**
- Block **D2** is represented by variable **d**

- Block **conditions.OUT2** is represented by variable **e**
- Block **D3** is represented by variable **f**
- Block **conditions.OUT3** is represented by variable **g**
- Block **conditions.one** is represented by variable **h**
- Block **conditions.two** is represented by variable **i**
- Block **conditions.sum1** is represented by variable **j**
- Block **conditions.neg1** is represented by variable **k**
- Block **conditions.sum2** is represented by variable **l**
- Block **conditions.neg2** is represented by variable **m**
- Block **conditions.root** is represented by variable **n**
- Block **OutFib** is represented by variable **o**