Nájdite všetky stabilné modely logického programu

1.

$$\begin{aligned} w &\leftarrow not\ t \\ s &\leftarrow not\ w \\ t &\leftarrow not\ s \\ a &\leftarrow w, not\ p \\ p &\leftarrow \end{aligned}$$

2.

$$\begin{aligned} c &\leftarrow not\ a, b \\ a &\leftarrow not\ c \\ b &\leftarrow not\ d \\ d &\leftarrow not\ c \end{aligned}$$

3.

$$\begin{aligned} f &\leftarrow b, not\ a \\ b &\leftarrow p \\ a &\leftarrow p \\ b &\leftarrow \end{aligned}$$

4.

$$\begin{aligned} p &\leftarrow q \\ q &\leftarrow not\ p \\ q &\leftarrow q \end{aligned}$$

5.

$$\begin{aligned} a &\leftarrow b, c \\ b &\leftarrow a, c \\ d &\leftarrow d \end{aligned}$$

6.

$$\begin{aligned} c &\leftarrow a, not\ b \\ c &\leftarrow b, not\ a \\ a &\leftarrow d \\ b &\leftarrow d \end{aligned}$$

7.

$$\begin{array}{lll} a & \leftarrow & b \\ c & \leftarrow & not\ a \end{array}$$

8.

$$\begin{array}{lll} n & \leftarrow & not\ p \\ p & \leftarrow & \end{array}$$

9.

$$\begin{array}{lll} p & \leftarrow & q \\ q & \leftarrow & not\ r, p \end{array}$$

10.

$$\begin{array}{lll} b & \leftarrow & \\ a & \leftarrow & b \\ d & \leftarrow & a, not\ c \end{array}$$

11.

$$\begin{array}{lll} p & \leftarrow & not\ p \\ q & \leftarrow & not\ q \\ r & \leftarrow & \\ p & \leftarrow & r \\ q & \leftarrow & r \end{array}$$

12.

$$\begin{array}{lll} p & \leftarrow & not\ q \\ q & \leftarrow & not\ p \\ a & \leftarrow & q \end{array}$$

13.

$$\begin{array}{lll} s & \leftarrow & \\ r & \leftarrow & not\ s \\ q & \leftarrow & not\ r \\ p & \leftarrow & not\ q \end{array}$$

14.

$$\begin{array}{lcl} a & \leftarrow & not\ b \\ b & \leftarrow & not\ a \\ x & \leftarrow & not\ y \\ y & \leftarrow & not\ x \\ a & \leftarrow & x \end{array}$$

15.

$$\begin{array}{lcl} in(2) & \leftarrow & \\ in(1) & \leftarrow & not\ in(3) \\ in(3) & \leftarrow & not\ in(1), not\ in(4) \\ in(4) & \leftarrow & not\ in(3) \end{array}$$

16.

$$\begin{array}{lcl} p & \leftarrow & \\ r & \leftarrow & p, not\ q \\ q & \leftarrow & p, not\ r \end{array}$$

17.

$$\begin{array}{lcl} p & \leftarrow & q \\ p & \leftarrow & not\ r \\ r & \leftarrow & not\ q \\ q & \leftarrow & not\ p \end{array}$$

18.

$$\begin{array}{lcl} c(1) & \leftarrow & not\ b(1) \\ c(2) & \leftarrow & not\ b(2) \\ b(1) & \leftarrow & not\ c(1) \\ b(2) & \leftarrow & not\ c(2) \end{array}$$

19.

$$\begin{array}{lcl} in(1) & \leftarrow & not\ in(2), not\ in(3) \\ in(2) & \leftarrow & not\ in(1), not\ in(4) \\ in(3) & \leftarrow & not\ in(1), not\ in(4) \\ in(4) & \leftarrow & not\ in(2), not\ in(3) \end{array}$$

20.

$$\begin{aligned} z &\leftarrow not\ x, not\ y \\ x &\leftarrow not\ u, not\ z \end{aligned}$$

21.

$$\begin{aligned} a &\leftarrow not\ b, not\ d \\ c &\leftarrow not\ b, not\ d \\ d &\leftarrow not\ a, not\ c \\ b &\leftarrow a, not\ c \end{aligned}$$

22.

$$\begin{aligned} a &\leftarrow not\ b, d \\ d &\leftarrow not\ c \\ c &\leftarrow not\ d \\ a &\leftarrow b \end{aligned}$$

23.

$$\begin{aligned} a &\leftarrow not\ b \\ b &\leftarrow not\ a \\ c &\leftarrow not\ d \\ d &\leftarrow not\ c \end{aligned}$$

24.

$$\begin{aligned} a &\leftarrow b, not\ c \\ b &\leftarrow c, not\ a \\ c &\leftarrow a, not\ b \end{aligned}$$

25.

$$\begin{aligned} p &\leftarrow not\ q, not\ r \\ q &\leftarrow not\ p \\ r &\leftarrow not\ s \\ s &\leftarrow not\ r \end{aligned}$$

26.

$$\begin{aligned} p &\leftarrow not\ q \\ p &\leftarrow not\ r \\ q &\leftarrow not\ s \\ s &\leftarrow \end{aligned}$$

27.

$$\begin{array}{rcl} p & \leftarrow & q \\ r & \leftarrow & not\ p \end{array}$$

28.

$$\begin{array}{rcl} q(X) & \leftarrow & not\ r(X) \\ r(X) & \leftarrow & not\ q(X) \\ s(1) & \leftarrow & \\ s(2) & \leftarrow & \end{array}$$

29.

$$\begin{array}{rcl} q(X) & \leftarrow & not\ r(Y) \\ r(X) & \leftarrow & not\ q(Y) \\ s(1) & \leftarrow & \\ s(2) & \leftarrow & \end{array}$$

30.

$$\begin{array}{rcl} p(X) & \leftarrow & \\ s(a) & \leftarrow & \\ \neg s(b) & \leftarrow & \\ \neg s(c) & \leftarrow & \\ some\_p & \leftarrow & p(X) \\ & \leftarrow & some\_p \end{array}$$

31.

$$\begin{array}{rcl} p(X) & \leftarrow & \\ s(a) & \leftarrow & \\ \neg s(b) & \leftarrow & \\ \neg s(c) & \leftarrow & \\ some\_p & \leftarrow & p(X) \\ & \leftarrow & not\ some\_p \end{array}$$

32.

$$
\begin{aligned}
\neg holds(X) &\leftarrow input(X), not\ holds(X)\\
holds(X) &\leftarrow input(X), not\ \neg holds(X)\\
input(a) &\leftarrow\\
input(b) &\leftarrow\\
\neg result &\leftarrow holds(X), holds(Y), X \neq Y\\
\neg result &\leftarrow \neg holds(X), \neg holds(Y), X \neq Y\\
result &\leftarrow not\ \neg result
\end{aligned}
$$

33.

$$
\begin{aligned}
object(a) &\leftarrow\\
object(b) &\leftarrow\\
object(c) &\leftarrow\\
object(d) &\leftarrow\\
p(a, X) &\leftarrow object(X)\\
p(b, X) &\leftarrow object(X), X \neq b\\
\neg p(X, Y) &\leftarrow object(X), object(Y), not\ p(X, Y)\\
\neg for\_all(X) &\leftarrow \neg p(X, Y)\\
for\_all(X) &\leftarrow object(X), not\ \neg for\_all(X)\\
result &\leftarrow for\_all(X)\\
\neg result &\leftarrow not\ result
\end{aligned}
$$

34.

$$
\begin{aligned}
object(a) &\leftarrow\\
object(b) &\leftarrow\\
object(c) &\leftarrow\\
object(d) &\leftarrow\\
p(X, a) &\leftarrow object(X)\\
\neg p(X, Y) &\leftarrow object(X), object(Y), not\ p(X, Y)\\
exists\_some(X) &\leftarrow p(X, Y)\\
\neg exists\_some(X) &\leftarrow not\ exists\_some(X), object(X)\\
\neg result &\leftarrow object(X), \neg exists\_some(X)\\
result &\leftarrow not\ \neg result
\end{aligned}
$$