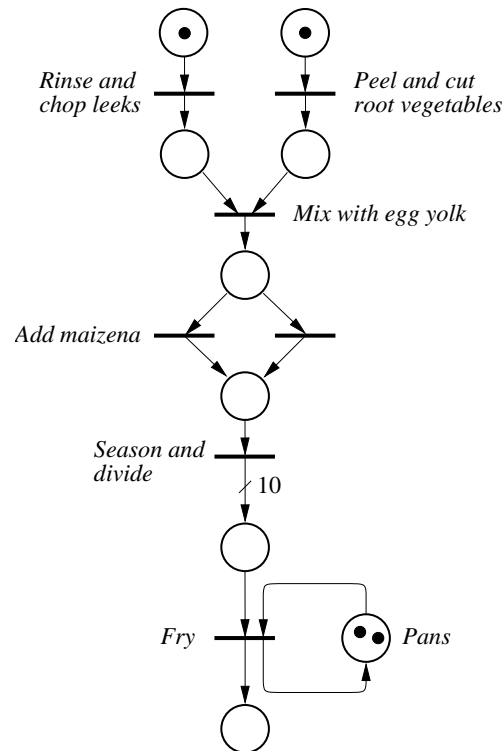


Solutions for Exercises, Week 1

1. Solution for Petri.3

The recipe can be modelled to various detail. Here is a proposal which reflects most of the description:



Remarks: Whether to add maizena or not is represented by a choice with a void branch. The the crossed arc with a 10 represents 10 arrows corresponding to the division into portions. According to the way we define simultaneous firings of a transition with itself, the last part allows for frying two pancakes at a time.

2. Solution for Petri.5

Figure 1.1 in [Basic] is represented by Petri Net $N = (P, T, F)$ where

$$\begin{aligned}
 P &= \{p_1, p_2, p_3, p_4, p_5\} \\
 T &= \{t_1, t_2, t_3, t_4, t_5\} \\
 F &= \{(p_1, t_1), (p_1, t_3), (p_2, t_3), (p_3, t_2), (p_4, t_5), (p_5, t_4) \\
 &\quad (t_1, p_3), (t_2, p_1), (t_3, p_4), (t_4, p_2), (t_5, p_3), (t_5, p_5)\}
 \end{aligned}$$

[In order to represent multiple arrows between a place/transition pair, the relation F is understood to be a *multiset* (ie. a set in which each element may occur more than once).]