Situational

Low Priority: LP

Medium Priority: MP
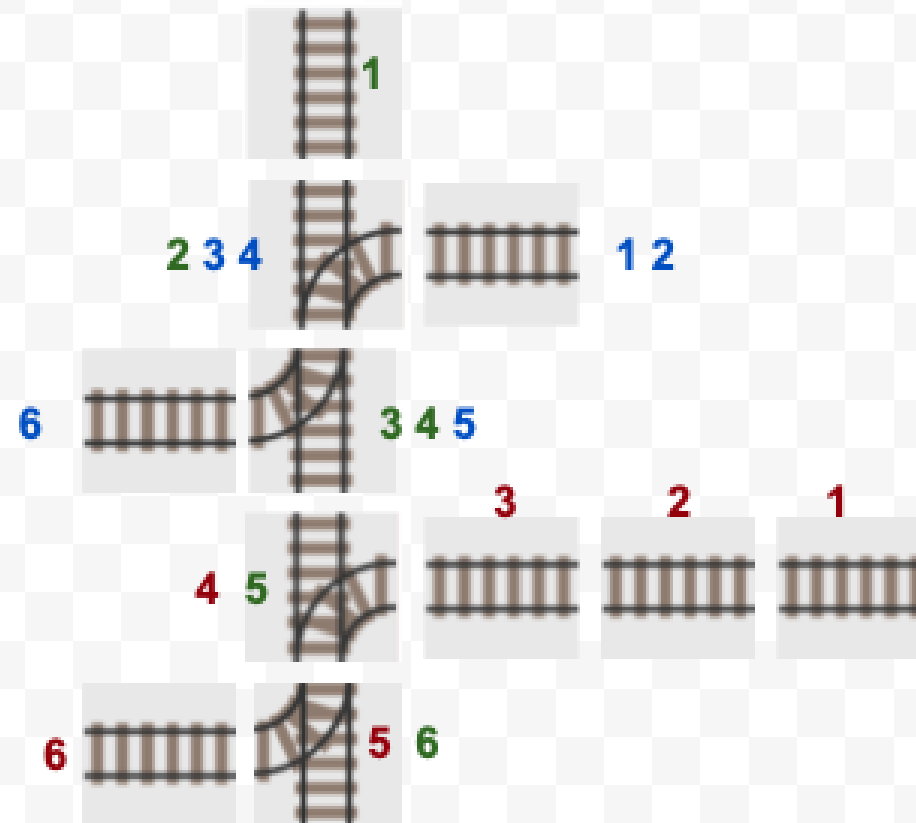
High Priority: HP
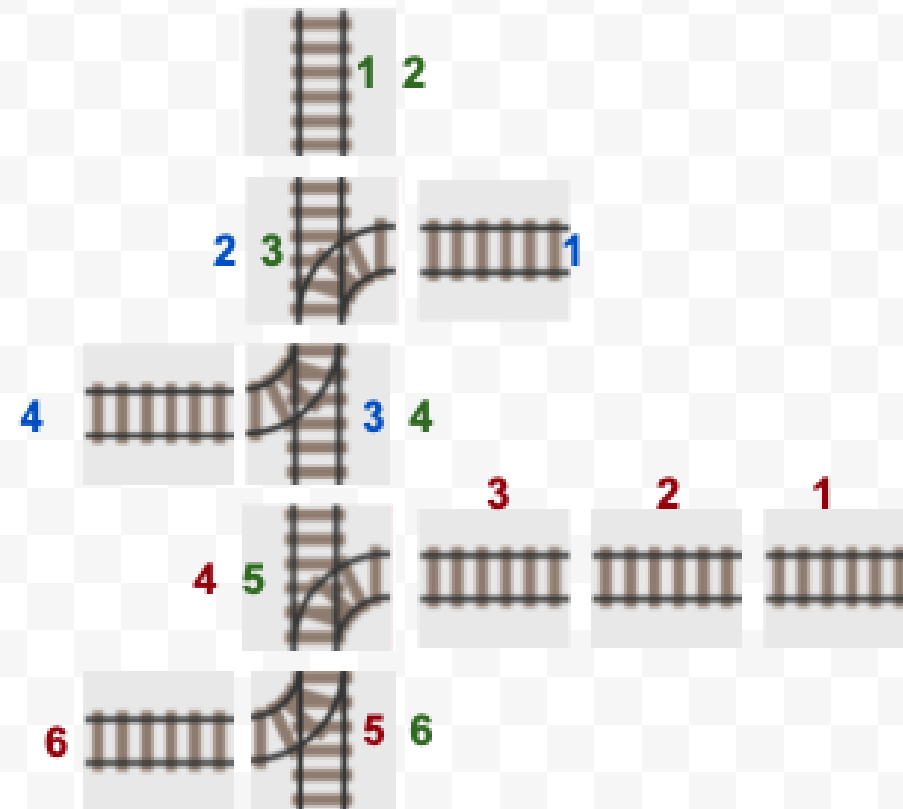
	Wait Count
LP	2
MP	1
HP	0

Global

Low Priority: LP

Medium Priority: MP

High Priority: HP

	Wait Count
LP	0
MP	1
HP	0

Situational

Conflict Point: A location where at least one train must wait before reaching it; otherwise, two or more trains would occupy same track segment at the same time.

At each conflict point the train with highest priority moves first.

Global

=> We receive conflict free answer sets because of integrity constraints.

- We select only those where highest priority trains achieve minimal arrival time.

- From this subset, we then select only those where medium priority trains achieve minimal arrival time

- From this subset, we then finally select only those answer sets where low priority trains achieve minimal arrival time
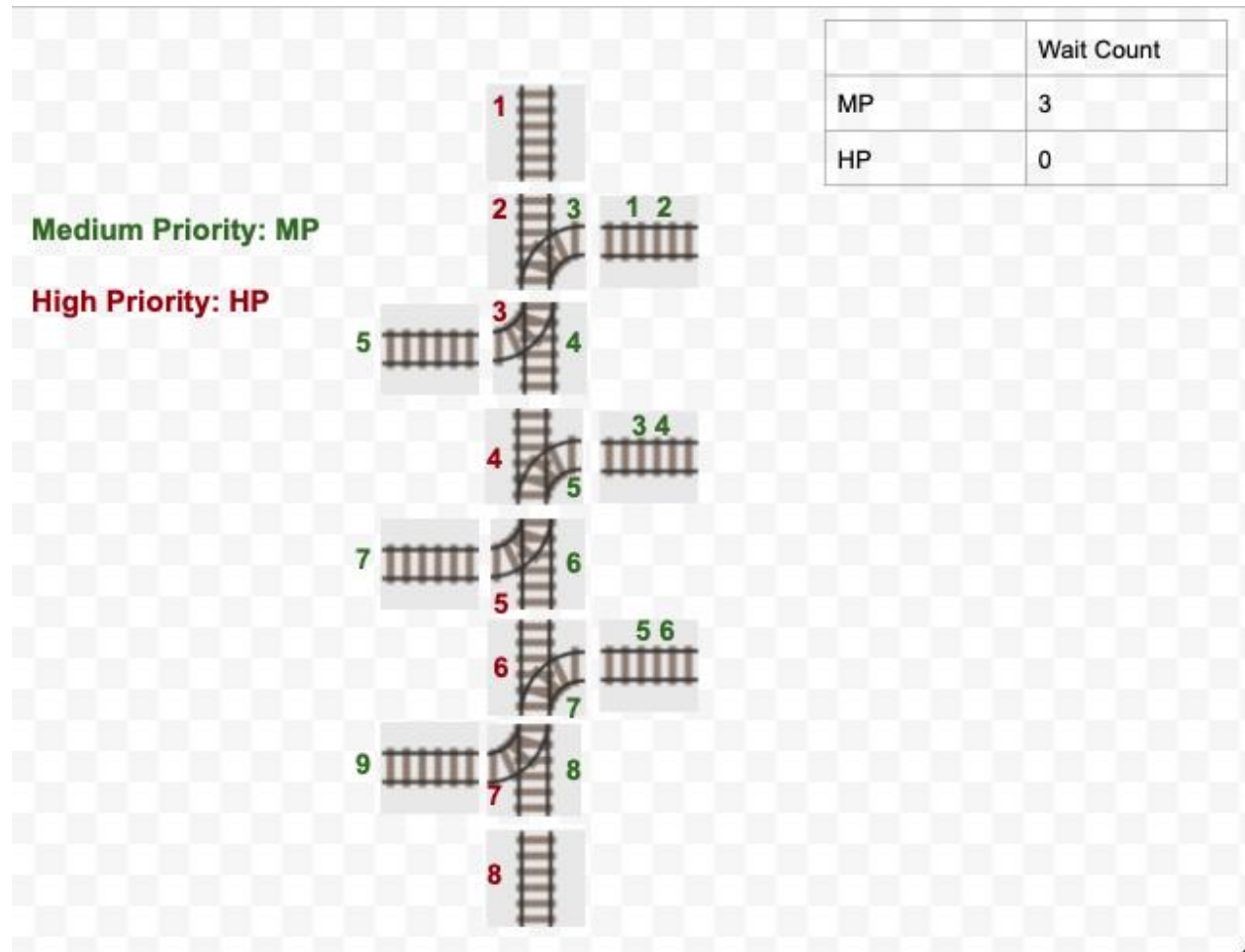
Global

=> Can be enforced with minimize statements.

Caveat (as seen in example):

A medium priority train may get treated worse than a low priority train.

Problem:
Too many sacrifices for HP

Idea:
Cost function with weights

High priority trains carry more weight but do not dominate the outcome.

Dynamic priorities

Priority changes may occur like malfunctions.