TSP problem formulation

Problem statement:
Given a list of cities and the distances between each pair of cities, what is the shortest possible route that visits each city exactly once and returns to the origin city?

Definitions

$distances_{i,j}$ distance from location i -> j

$depot$ start/end location

c=0…C city index

Decision variables

$x_{i,j} = \{0, 1\}$ Whether node i is followed by node j

Constraints

C1: Nodes must be in a hamiltonian graph
Luckily, this constraint can be directly called in ortools as such

Objective

$$minimize \sum_{i,j} x_{i,j} * distances_{i,j}$$