Package dependencies resolver

Package Management Systems (PMS) provide an easy way to install software. Programs installed with package managers are usually using libraries or even other programs that are equally distributed by the PMS. Each package has a list of dependencies within the PMS. When installing new program or library the package manager resolves those dependencies and installs, upgrades, downgrades or removes related packages.

The goal of this assignment is to create a dependency resolver. We will provide test input data in JSON format. Your task is to write a program that will process this data and outputs an ordered list of affected packages. To simplify the assignment, only one relation type will be introduced - “requires”. This means that when package A requires package B, and we want to install A, B will be also installed and the output of the dependencies resolver will be [‘B’, ‘A’] .

Note: Tests for the assignment are not required, but are a bonus.

Example:

packages.pms:

```
[
{“name” : “A”, “requires” : [“B”, “D”, “E”]},
{“name” : “B”, “requires” : [“F”]},
{“name” : “C”, “requires” : [“G”, “H”]},
{“name” : “D”, “requires” : [“G”]},
{“name” : “E”, “requires” : []},
{“name” : “F”, “requires” : []},
{“name” : “G”, “requires” : []},
{“name” : “H”, “requires” : []}
]
```

Command:

```
dependency_resolver packages.pms A
```

Expected output:

```
[“F”, “B”, “G”, “D”, “E”, “A”]
```