Course Schedule

There are a total of *n* courses you have to take, labeled from 0 to n-1.

Some courses may have prerequisites, for example to take course 0 you have to first take course 1, which is expressed as a pair: [0,1]

Given the total number of courses and a list of prerequisite **pairs**, is it possible for you to finish all courses?

class Solution **{**

public boolean canFinish**(**int numCourses**,** int**[][]** prerequisites**)** **{**

HashMap**<**Integer**,**Integer**>** map **=** **new** HashMap**<**Integer**,**Integer**>();**

ArrayList**<**Integer**>** list **=** **new** ArrayList**<**Integer**>();**

ArrayList**<**Integer**>** temp **;**

**for(**int i**=**0**;** i **<** numCourses**;** i**++){**

map**.**put**(**i**,**0**);**

**}**

**for(**int i **=** 0**;** i**<**prerequisites**.**length**;** i**++){**

map**.**put**(**prerequisites**[**i**][**0**],**map**.**get**(**prerequisites**[**i**][**0**])+**1**);**

**}**

**while(**list**.**size**()** **<** numCourses**){**

temp **=** refreshList**(**list**,**map**);**

**if(**temp**.**size**()==**0**)**

**return** **false;**

**for(**Integer num **:** temp**){**

**for(**int i **=** 0**;** i **<** prerequisites**.**length**;** i**++){**

**if(**num **==** prerequisites**[**i**][**1**]){**

map**.**put**(**prerequisites**[**i**][**0**],**map**.**get**(**prerequisites**[**i**][**0**])-**1**);**

**}**

**}**

**}**

**}**

**return** **true;**

**}**

public ArrayList**<**Integer**>** refreshList**(**ArrayList**<**Integer**>** list**,** HashMap**<**Integer**,**Integer**>** map**){**

ArrayList**<**Integer**>** currentList **=** **new** ArrayList**<**Integer**>();**

**for(**Integer num **:** map**.**keySet**()){**

**if(**map**.**get**(**num**)==** 0**){**

currentList**.**add**(**num**);**

list**.**add**(**num**);**

map**.**put**(**num**,-**1**);**

**}**

**}**

**return** currentList**;**

**}**

**}**