207. Course Schedule

题目描述： **https://leetcode.com/problems/course-schedule/**

> 总共需选择0-n-1门课程，给定选课前提[i,j]，说明选择i之前必须选择j 求是否有合适的选择方案。

解题思路：

拓扑排序

代码：

```cpp
class Solution {
public:
    bool dfs(vector<unordered_set<int> > &graph, vector<int> &visited, int i) {
        if(visited[i] == 1) return true;
        if(visited[i] == -1) return false;
        visited[i] = -1;
        for(auto &item: graph[i]) {
            if(!dfs(graph, visited, item)) {
                return false;
            }
        }
        visited[i] = 1;
        return true;
    }
    bool canFinish(int numCourses, vector<pair<int, int>>& prerequisites) {
        vector<unordered_set<int> > graph(numCourses);
        vector<int> visited(numCourses, 0);
        for(auto item: prerequisites) {
            if(graph[item.second].find(item.first) == graph[item.second].end()) {
                graph[item.second].insert(item.first);
            }
        }
        for(int i = 0; i < numCourses; i++) {
            if(!dfs(graph, visited, i)) {
                return false;
            }
        }
        return true;
    }
};
```