

# 解题代码

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from apriori import *
# 编写代码实现关联规则抽取

dataset = load_data('data/apriori.txt')

# 定义 generate_big_rules函数来获取关联规则
def generate_big_rules(L, support_data, min_conf):
    big_rule_list = []
    sub_set_list = []
    for i in range(0, len(L)):
        for freq_set in L[i]: # freq_set: ('B4')、 ('B4', 'C4', 'H4')
            for sub_set in sub_set_list:
                ***** BEGIN *****
                if sub_set.issubset(freq_set):
                    # 计算置信度
                    conf = support_data[freq_set] / support_data[freq_set - sub_set]
                    # 前件、后件、支持度、置信度
                    big_rule = (freq_set - sub_set, sub_set, support_data[freq_set], conf)
                    if conf >= min_conf and big_rule not in big_rule_list:
                        big_rule_list.append(big_rule)
                ***** END *****
            sub_set_list.append(freq_set)
    return big_rule_list

def task():
    L, support_data = generate_L(dataset, k=4, min_support=0.06)
    # 根据频繁项集寻找关联规则, 设置置信度为 0.75
    big_rules_list = generate_big_rules(L, support_data, min_conf=0.75)
    return big_rules_list
```