```
from operator import itemgetter
class ProgrammingLanguage:
     """Язык программирования"""
    def __init__(self, id, name):
    self.id = id
         self.name = name
class SyntaticConstruction:
     """Синтаксическая конструкция"""
    def __init__(self, id, name, usage_frequency, pl_id):
          \overline{\text{self.id}} = \text{id}
         self.name = name
         self.usage_frequency = usage_frequency
          self.pl_id = pl_id
class PlSc:
     """Синтаксические конструкции языков программирования"""
    def __init__(self, pl_id, sc_id):
          \overline{\text{self.pl}} id = pl id
         self.sc id = sc id
languages = [
    ProgrammingLanguage(1, 'Java'),
ProgrammingLanguage(2, 'C++'),
     ProgrammingLanguage(3, 'C#'),
constructions = [
    SyntaticConstruction(1, 'Идентификатор', 100, 1), SyntaticConstruction(2, 'Константа', 50, 1), SyntaticConstruction(3, 'Переменная', 100, 2), SyntaticConstruction(4, 'Тип', 80, 3), SyntaticConstruction(5, 'Метка', 20, 3),
languages_constructions = [
     Plsc(\overline{1}, 1),
    Plsc(1, 2),
    Plsc(2, 3),
Plsc(3, 4),
    PlSc(3, 5),
def main():
     """Основная функция"""
    one_to_many = [(c.name, c.usage_frequency, l.name)
    for c in constructions
    for 1 in languages
    if c.pl id==l.id]
    many_to_many_temp = [(l.name, lc.pl_id, lc.sc_id)
for l in languages
     for lc in languages_constructions
    if l.id==lc.pl id]
    many_to_many = [(c.name, c.usage_frequency, language_name)
     for language_name, language_id, construction_id in many_to_many_temp
     for c in constructions
    if c.id==construction id]
    print('Задание Б1')
     res 11 = sorted(one to many, key=itemgetter(0))
    print(res 11)
     print('\nЗадание Б2')
     language construction count = {}
     for 1 in languages:
          language_name = l.name
          constructions_count = sum(1 for c in one_to_many if c[2] == language_name)
          language construction count[language name] = constructions count
```

```
sorted_language_construction_count = sorted(language_construction_count.items(), key=lambda x: x[1], reverse=True)

for language, count in sorted_language_construction_count:
        print(f'{language}: {count} конструкций')

print('\nЗадание БЗ')
    filtered_many_to_many = [(c_name, language_name) for c_name, _, language_name in many_to_many if c_name.endswith('a')]

for syntax, language in filtered_many_to_many:
    print(f'{syntax}) ({language})')

if __name__ == '__main__':
    main()
```

```
Задание Б1
[('Идентификатор', 100, 'Java'), ('Константа', 50, 'Java'), ('Метка', 20, 'С#'), ('Переменная', 100, 'С++'), ('Тип', 80,
'С#')]
Задание Б2
Java: 2 конструкций
С#: 2 конструкций
С++: 1 конструкций
Задание Б3
Константа (Java)
Метка (С#)
```