```
class Microprocessor:
    def __init__(self, id, Name, Speed, computer_id):
        self.id = id
        self.Name = Name
        self.Speed = Speed
        self.computer_id = computer_id

class Computer:
    def __init__(self, id, Model):
        self.id = id
        self.Model = Model

# Создаем списки объектов с тестовыми данными
microprocessors = [
    Microprocessor(1, "Intel Core i7", 3.2, 1),
    Microprocessor(2, "AMD Ryzen 5", 3.0, 1),
    Microprocessor(3, "Intel Core i5", 2.8, 2),
    Microprocessor(4, "AMD Ryzen 7", 3.4, 2),
    Microprocessor(5, "Intel Core i3", 2.4, 3)
]

computers = [
    Computer(1, "Dell XPS 13"),
    Computer(2, "HP Spectre x360"),
    Computer(3, "Lenovo ThinkPad X1 Carbon")
]

# Запрос 1: Список микропроцессоров, у которых Name начинается с "Intel" и
модели их компьютеров
result_query_1 = [(m.Name, c.Model) for m in microprocessors for c in computers
if m.Name.startswith("Intel")]
print("Query 1:")
for microprocessor, computer_model in result_query_1:
    print(f"{microprocessor}, used in the computer {computer_model}")

# Запрос 2: Список компьютеров с максимальной скоростью микропроцессоров,
отсортированный по скорости
max_speed_by_computers = {}

for m in microprocessors:
    if m.computer_id in max_speed_by_computers:
        if m.Speed > max_speed_by_computers[m.computer_id]:
            max_speed_by_computers[m.computer_id] = m.Speed
    else:
        max_speed_by_computers[m.computer_id] = m.Speed

sorted_computers = sorted(computers, key=lambda c: max_speed_by_computers[c.id],
reverse=True)
print("\nQuery 2:")
for computer in sorted_computers:
    print(f"{computer.Model}: Maximum processor speed =
{max_speed_by_computers[computer.id]:.2f} GHz")

# Запрос 3: Список компьютеров, у которых модель начинается с буквы "D", и
```

```
список микропроцессоров, используемых в них
result_query_3 = {c.Model: [m.Name for m in microprocessors if m.computer_id ==
c.id] for c in computers if c.Model.startswith("D")}
print("\nQuery 3:")
for computer, microprocessors_in_computer in result_query_3.items():
    print(f"{computer}: {', '.join(microprocessors_in_computer)}")


Запрос 1:
[('Intel Core i7', 'Dell XPS 13'), ('Intel Core i5', 'HP Spectre x360')]

Запрос 2:
[('Dell XPS 13', 3.20), ('HP Spectre x360', 2.80), ('Lenovo ThinkPad X1 Carbon',
0.00)]

Запрос 3:
{'Dell XPS 13': ['Intel Core i7', 'Intel Core i5'], 'HP Spectre x360': []}
```