**SQL**

Given a table: ORDERS with following columns  
- CUSTOMER\_ID  
- DAY\_OF\_ORDER  
- PRODUCT  
- PRICE

**Q1. Write SQL query to find customers who have bought BOTH products 'iPhone 5s' AND also 'Samsung Note'.**

**Q2. For all customers who have at least two orders, what is the average number of days elapsed between 1st and 2nd order (do not worry about using exact date functions)**

**PYTHON**

**Q1: Implement to\_bin(n) function -**

# Given a number as input write a function that returns a  
# string with binary representation of a positive integer number  
# We would like you to write the algorithm to generate this  
# binary representation in string format without library functions  
  
def to\_bin(n):  
    # write your code here  
    return bin\_str  
  
*# Sample test cases to verify functionality  
assert to\_bin(2) == '10'  
assert to\_bin(7) == '111'  
assert to\_bin(45) == '101101'  
assert to\_bin(32) == '100000'  
assert to\_bin(0) == '0'*

**Q2: Implement a function to extract out all string literals from a SQL string return them in a sorted list**

def extract\_string\_literals(str):  
    # write your code here  
    return str\_literal\_list  
  
*# Sample test cases to verify functionality  
assert extract\_string\_literals("select \* from order where orderid = 'OEHKJHFUI' and product = 'Iphone 5s'") = ['Iphone 5s', 'OEHKJHFUI']  
assert extract\_string\_literals("select \* from inventory") = []  
assert extract\_string\_literals("select \* from order where orderid in ('o1','o2','o1')") = ['o1', 'o1', 'o2']*