

Task 1) Please study the tables below.

Table 1

**Table name - libraby\_accounts**

*This table has all the library accounts. One account per user.*

**Columns -**

id

student\_id

librarian\_id

Table 2

**Table name - libraby\_books\_taken**

*Keeps track of all the books taken by user accounts. One account can have multiple books taken.*

**Columns -**

id

account\_id

book\_name

type (values - fiction / horror)

Table 3

**Table name - users**

*Contains records of all users and librarians*

**Columns -**

id

name

category (User/ Librarian)

**Please write a MySQL query to fetch the User's name and the Librarian's name of the library accounts where they have borrowed more than 5 horror books and less than 6 fiction books and the User's name starts with A and is not more than 7 letters. Dont use Subquerys.**

TASK 2) Write a Php function to achieve the following -

Combine two already sorted arrays containing numbers, into a single sorted array.

Ensure the merged array stays sorted without using built-in sorting tools.

From this newly merged sorted array, count how many distinct pairs of distinct numbers from the array, when added together, equals any target number. Pairs like (3,1) and (1,3) are the same.

**Example:**

Let's say you have two sorted arrays and a target\_sum:

**\$array1** = [1, 3, 5, 6, 8, 22]

**\$array2** = [2, 4, 7, 9, 10]

**\$target\_sum** = 7

After merging and sorting the arrays, you get: [1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 22].

Now, let's consider the pairs that add up to target sum of 7.

There are 3 pairs as such-

**(1, 6), (2, 5), (3, 4)**

So the final answer you function should print is -

The merged sorted array is - **[1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 22]**

The pair count that adds up to 7 is **3**.

