

# Database Systems Lab

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## SESSION 4

(PDS V3)

### Search on an arbitrary field

PDS so far supports only search by a key on which an index is available. For testing so far, we have been testing PDS using `contact_id` as the indexed key. In this lab, you will implement a new search function for searching on an arbitrary attribute on which index is NOT available. For example, the new function can be used to search based on the contact name instead of `contact_id`.

### Activity Details

- You need to implement one new function in `rollno_contact.c`: **`match_contact_name`** for matching the record with the `contact_name`
- You need to implement a new function named **`get_rec_by_field`**. Refer to the given `pds.h` file for instructions on the changes to be done to PDS functions
- A driver program called `pds_tester` is given to you. This file takes a file with commands such as (STORE, KEY\_SEARCH, CONTACT-NAME-SEARCH, OPEN, CLOSE) inside.
- Test your program thoroughly with the driver program and test case file. One sample test case file is given to you

### Commands

- Use the following command for creating `pds_tester` executable:

```
gcc -o pds_tester roll_number_contact.c pdsv3.c bst.c pds_testerv3.c
```

For testing using `pds_tester`, use the following command:

```
./pds_tester public_testcase.in
```

### Submission

Upload ONLY the following file to LMS:

`Pdsv3.c` and `roll_number_contact.c`

(`roll_number` should be replaced by your roll number in LOWER CASE)

YOU ARE NOT EXPECTED CHANGE ANY OF THE OTHER FILES GIVEN TO YOU