Database Systems Lab

DELETE Operation

In this lab session, you will implement the DELETE operation to delete existing record in the data file.

Complete the following tasks:

Modify the rollno_lab4.c function as per the following:

```
int libsys_create( char *repo_name)
{
    //remains same
}



int libsys_open( char *repo_name )
{
    //remains same
}

int put_book_by_isbn( int key, struct Book *rec )
{

}// put_rec_by_key
//-----check index file for key
//-----if key already present check for flag
//-----if key is present but flag is RECORD_DELETED then just add
entry at same index i.e update only offset and update flag; return
status
//-----if key is present but flag is RECORD_PRSENT return failure as
data is already present
//-----if key is not prsent then proceed with following steps:

// Seek to the end of the data file
// Create an index entry with the current data file location using
ftell
// Add index entry to array using offset returned by ftell
// Write the key at the current data file location
// Write the record after writing the key
// return status
```

```c
int get_book_by_isbn( int key, struct Book *rec )
{

// get_rec_by_key
//check repo status
// Search for index entry in index_entries array
//-----use flag : RECORD_PRSENT to read valid entries
// Seek to the file location based on offset in index entry
// Read the key at the current file location
// Read the record after reading the key
}


int delete_book_by_isbn( int key )
{


/
//-----delete_rec_by_key
//-----check repo status
//-----Search for index entry in index_entries array
//-----if key matches and flag is RECORD_PRSENT then reset flag
//-----if key matches but flag is RECORD_DELETED  return status
LIB_REC_NOT_FOUND
}


int libsys_close()
{

   //remains same
}
```

Testing

  a. The following driver program is given to you:
    • simple_tester.c and libsys_tester.c (generic testing with input
     data file like testcase.in)
  b. Test your program thoroughly with the above driver program by
   creating your own test input files

Commands

 • Use the following command for creating pds_tester executable:

```
gcc -o output bst.c rollno_lab4.c simple_tester.c

./output

gcc -o output bst.c rollno_lab4.c libsys_tester.c

./output testcase.in
```

For testing using pds_tester, use the following command:

```
pds_tester testcase.in
```

Submission

Upload the following to LMS as a zipped file (IMTXXXXXXX.zip):

- rollno_lab4.c

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