REPORT1:

UNF:

CATALOGUE(catal_ddcno,catal_titile,(author_id,author_firstname,author_lastname),(subject_id, subject_desc),catal_descrip,publisher_id,publisher_name,published_date,book_edition,book_no _page,book_language,catal_note,(isbn_no,isbn_booktype))

1NF:

CATALOGUE(<u>catal_ddcno</u>,catal_titile,catal_descrip,publisher_id,publisher_name,published_dat e,book_edition,book_no_page,book_language,catal_note)

CK:

catal_no

CATALAUTHOR(author id,catal ddcno,author firstname,author lastname)

CK:

author id, catal ddcno

CATALSUBJECT(catal ddcno,subject id,subject desc)

CK:

subject_id,catal_ddcno

ISBN(<u>isbn_no</u>,isbn_booktype,catal_ddcno)

CK:

Isbn_no

Partial Dependencies:

author_id -> author_firstname,author_lastname
subject_id ->subject_desc

2NF:

CATALOGUE(<u>catal_ddcno</u>,catal_titile,catal_descrip,publisher_id,publisher_name,published_dat e,book_edition,book_no_page,book_language,catal_note)

CATALAUTHOR(author id,catal ddcno)

AUTHOR(<u>author_id.</u>author_firstname,author_lastname)

CATALSUBJECT(<u>catal_ddcno</u>,<u>subject_id</u>,subject_desc)

SUBJECT(subject id, subject desc)

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ISBN(<u>isbn_no</u>,isbn_type,catal_ddcno)
Transitive Dependencies:
publisher_id -> publisher_name
3NF:
CATALOGUE(catal ddcno,catal titile,catal descrip,publisher id,published date,book edition,b
ook_no_page,book_language,catal_note)
PUBLISHER(<a href="mailto:publisher_id">publisher_name</a>)
CATALAUTHOR(author_id,catal_ddcno)
AUTHOR(<u>author_id.</u>author_firstname,author_lastname)
CATALSUBJECT(catal_ddcno,subject_id)
SUBJECT(subject id, subject desc)
ISBN(<u>isbn_no</u>,isbn_type,catal_ddcno)
Full Dependencies:
catal_ddcno->catal_titile,catal_descrip,publisher_id,published_date,book_edition,book_no_page
,book_language,catal_note
publisher_id ->publisher_name
author id -> author firstname, author lastname
subject_id ->subject_desc
catal_ddcno ->content_no,content_title
isbn_no -> isbn_type,catal_ddcno
```

UNF: BORROWER(borrower_no,borrower_first_name,borrower_last_name,borrower_class,borrower _status,(branch_code,book_copy_id,branch_nmae,borrowed_date,due_date,returned_date,fine _amount,date_finepaid))
1NF:
BORROWER(<u>borrower_no</u> ,borrower_first_name,borrower_last_name,borrower_class,borrower_status)
CK: borrower_no
LOAN(<u>branch_code,book_copy_id,borrowed_date,</u> borrower_no,branch_name,due_date,returned_date,fine_amount,date_finepaid)
CK's: branch_code,book_copy_id,borrowed_date
Partial Dependencies: branch_code -> branch_name
2NF: BORROWER(<u>borrower_no</u> ,borrower_first_name,borrower_last_name,borrower_class,borrower_status)
LOAN(<u>branch_code,book_copy_id,,borrowed_date,</u> branch_name,due_date,returned_date,fine_amount,date_finepaid)
BRANCH(<u>branch_code</u> ,branch_name)
Transitive Dependencies : None
3NF:

REPORT 2:

BORROWER(<u>borrower_no</u>,borrower_first_name,borrower_last_name,borrower_class,borrower_status)

LOAN(<u>branch_code,book_copy_id,borrowed_date,</u>branch_name,due_date,returned_date,fine_amount,date_finepaid)

BRANCH(branch code, branch name)

Full Dependencies:

borrower_no -> borrower_first_name,borrower_last_name,borrower_class,borrower_status branch_code,book_copy_id,borrowed_date->branch_name,due_date,returned_date,fine_amount,date_finepaid

branch_code ->branch_name

COLLECTED 3NF RELATIONS:

- 1. CATALOGUE(<u>catal_ddcno</u>,catal_titile,publisher_id,published_date,book_edition,book_no _page,book_language,catal_note)
- 2. PUBLISHER(publisher id,publisher name)
- 3. CATALAUTHOR(author id,catal ddcno)
- 4. AUTHOR(<u>author id.</u>author firstname,author lastname)
- 5. CATALSUBJECT(catal_ddcno,subject_id)
- 6. SUBJECT(subject_id,subject_desc)
- 7. ISBN(<u>isbn_no</u>,isbn_type,catal_ddcno)
- 8. BORROWER(<u>borrower_no</u>,borrower_first_name,borrower_last_name,borrower_class,borrower_status)
- 9. LOAN(<u>branch_code,book_copy_id,borrowed_date,</u>branch_name,due_date,returned_date,fine_amount,date_finepaid)
- 10. BRANCH(branch code, branch name)