

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(catal_ddcno,catal_titile,catal_descrip,publisher_id,publisher_name,published_date,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(isbn_no,isbn_booktype,catal_ddcno)

CK:

Isbn_no

Partial Dependencies:

author_id -> author_firstname,author_lastname

subject_id ->subject_desc

2NF:

CATALOGUE(catal_ddcno,catal_titile,catal_descrip,publisher_id,publisher_name,published_date,book_edition,book_no_page,book_language,catal_note)

CATALAUTHOR(author_id,catal_ddcno)

AUTHOR(author_id,author_firstname,author_lastname)

CATALSUBJECT(catal_ddcno,subject_id,subject_desc)

SUBJECT(subject_id,subject_desc)

ISBN(isbn_no,isbn_type,catal_ddcno)

Transitive Dependencies :

publisher_id -> publisher_name

3NF:

CATALOGUE(catal_ddcno,catal_titile,catal_descrip,publisher_id,published_date,book_edition,book_no_page,book_language,catal_note)

PUBLISHER(publisher_id,publisher_name)

CATALAUTHOR(author_id,catal_ddcno)

AUTHOR(author_id,author_firstname,author_lastname)

CATALSUBJECT(catal_ddcno,subject_id)

SUBJECT(subject_id,subject_desc)

ISBN(isbn_no,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

REPORT 2:

UNF:

BORROWER(borrower_no,borrower_first_name,borrower_last_name,borrower_class,borrower_status,(branch_code,book_copy_id,branch_name,borrowed_date,due_date,returned_date,fine_amount,date_finepaid))

1NF:

BORROWER(borrower_no,borrower_first_name,borrower_last_name,borrower_class,borrower_status)

CK:

borrower_no

LOAN(branch_code,book_copy_id,borrowed_date,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(borrower_no,borrower_first_name,borrower_last_name,borrower_class,borrower_status)

LOAN(branch_code,book_copy_id,borrowed_date,branch_name,due_date,returned_date,fine_amount,date_finepaid)

BRANCH(branch_code,branch_name)

Transitive Dependencies :

None

3NF:

BORROWER(borrower_no,borrower_first_name,borrower_last_name,borrower_class,borrower_status)

LOAN(branch_code,book_copy_id,borrowed_date,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(catal_ddcno,catal_title,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(author_id,author_firstname,author_lastname)
5. CATALSUBJECT(catal_ddcno,subject_id)
6. SUBJECT(subject_id,subject_desc)
7. ISBN(isbn_no,isbn_type,catal_ddcno)
8. BORROWER(borrower_no,borrower_first_name,borrower_last_name,borrower_class,borrower_status)
9. LOAN(branch_code,book_copy_id,borrowed_date,branch_name,due_date,returned_date,fine_amount,date_finepaid)
10. BRANCH(branch_code,branch_name)

Attribute synthesis :

None

FINAL 3NF RELATIONS :

CATALOGUE(catal_ddcno,catal_title,catal_descrip,publisher_id,published_date,book_edition,book_no_page,book_language,catal_note)
PUBLISHER(publisher_id,publisher_name)
CATALAUTHOR(author_id,catal_ddcno)
AUTHOR(author_id,author_firstname,author_lastname)
CATALSUBJECT(catal_ddcno,subject_id)
SUBJECT(subject_id,subject_desc)
ISBN(isbn_no,isbn_type,catal_ddcno)
BORROWER(borrower_no,borrower_first_name,borrower_last_name,borrower_class,borrower_status)
LOAN(branch_code,book_copy_id,borrowed_date,branch_name,due_date,returned_date,fine_amount,date_finepaid)
BRANCH(branch_code,branch_name)