Winter of Code 3.0

Proposal

for the project

Digital-Library

under

Code Family

General Information

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Synopsis

"Digital library"

term which is used to describe distributed access to collections of digital information

is a collection of material organized for access for a specific purpose, by the users of the electronic documents

the material is in digital form: consist of or incorporate various media (photographs, video, sound recordings, text and page images); native or converted (data) in digital form for use in a computer

the access is provided through search engines using metadata (bibliographic and descriptive information about the contents), making the information accessible for use.

it can be accessed remotely (key aspect), usually through a web browser the users for whom it is intended are a defined community or group of communities that may be scattered around the world, or may be in the same geographical location

Header 2

A digital library is a special library with a focused collection of digital objects that can include text, visual material, audio material, video material, stored as electronic media formats (as opposed to print, microform, or other media), along with means for organizing, storing, and retrieving the files and media contained in the library collection. Digital libraries can vary immensely in size and scope, and can be maintained by individuals, organizations, or affiliated with established physical library buildings or institutions, or with academic institutions.[1] The digital content may be stored locally, or accessed remotely via computer networks. An electronic library is a type of information retrieval system.

Benefits to the Community

Anyone can get involved in a hackathon, regardless of their skill levels.

Everyone who completes a hackathon always comes out with an immense feeling of accomplishment. Whether they are highly skilled in a particular area or are a complete beginner, There's no better way to learn new technical skills than by participating in a hackathon. It's a great opportunity to brush up on my technical knowledge or get to grips with the basics, It's also a good chance to meet mentors, industry professionals and corporate sponsors who may be involved in the event.

By having a hackathon on MY CV, employers will see that me someone who likes to take initiative, be challenged and constantly learn new things – all extremely attractive traits for a potential employee.

For a successful career in a technical field, I will need a mix of hard and soft skills, and a hackathon will help you develop both.

The final benefit of participating in a hackathon event is the experience I get working with a team of people from different fields and perspectives

Idea

CRITERIA FOR DIGITAL LIBRARY:

To develop a digital library system, the following criteria can be considered:

1. Low cost, including all hardware and software components

2. Technically simple to install and manage

3. Robust

4. Scalable

5. Open and inter-operable.

6. Modular

7. User Friendly

8. Multi-user (including both searching and maintenance);

9. Multimedia digital object enabled:

10. Platform independent (including both client and server. components).

Principles For Digital Library Design

The following principles guide the development of the architecture.

1. Service driven

2. Open architecture

3. Scalability

4. Preservation

5. Privacy

6. Practicality

7. Modularity

8. Time frame

9. Client support

Project Plan

Technical Components of Digital Library

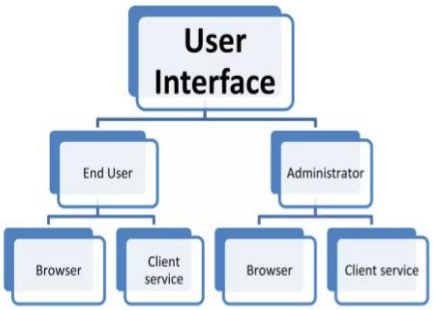
1. User Interface

2. Repository

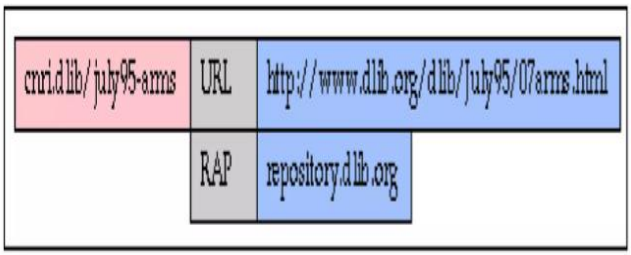
3. Handle system

4. Search System

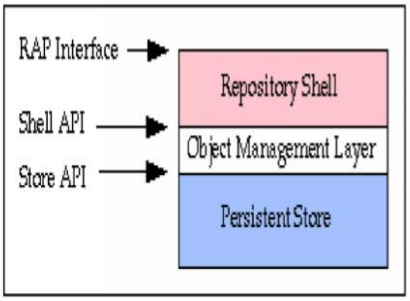
A. User Interface



C. Handle System:



B. Repository



D. Search System

- Index
- Search Interface
- Catalogues
- Directories

A Digital Library System may consist of four layers

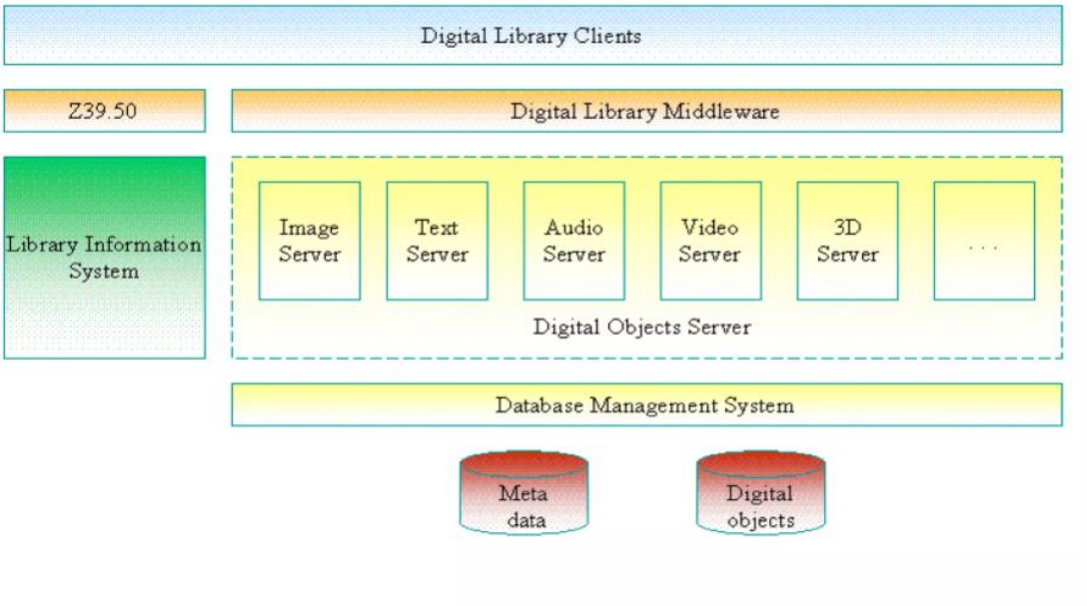
1. A Database Management System (DBMS)

2. Digital Objects Server

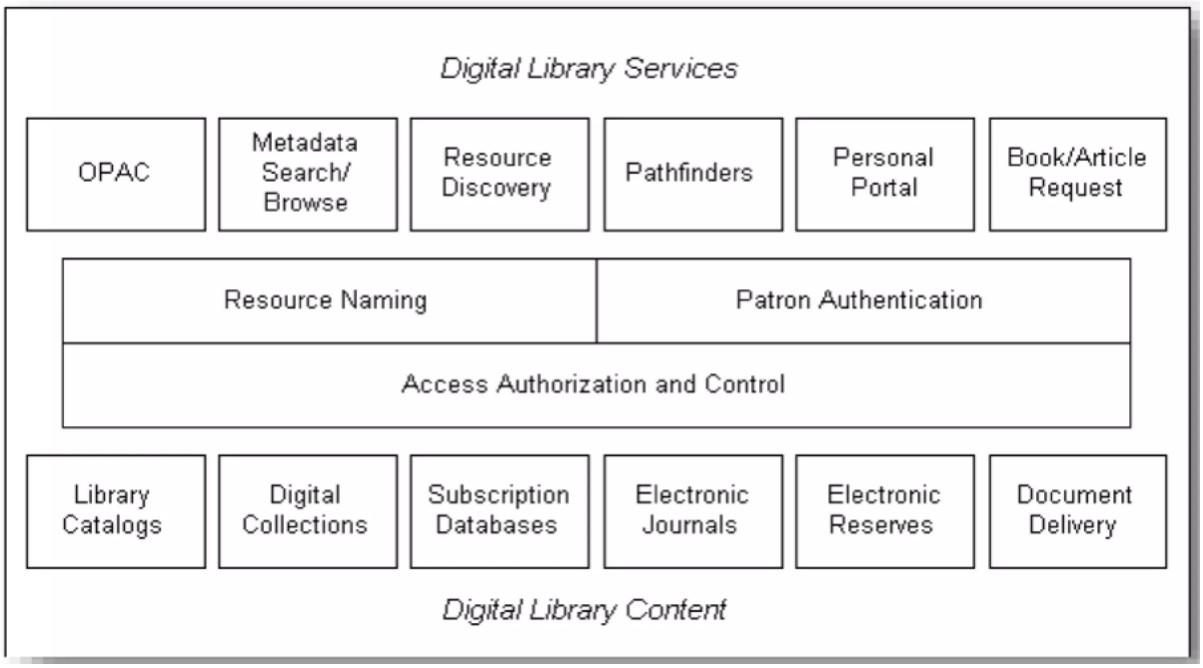
3. Digital Library Middleware

4. Digital Library Clients

[Digital Library Architecture]



[Digital Library Services]



A brief Introduction to the 5S Model

Streams	Text, Video, Audio, Image	Describes properties of the DL Content such as
Structures	Collection, Catalogue, hypertext, Document, Metadata	Specifies Organizational aspect of the DL Content
Spaces	Measures, measurable, topological, Vector, Probabilistic	Define logical and Presentational views of several DL Components
Scenarios	Searching, Browsing, Recommending	Details of the Behaviour of DL Services
Societies	Administrator, Manger, User	Defines administrator and managers responsible for running DL Services and relationship among them

DL Software Features

1.Different logical document types and levels

Book/ chapter, conference/paper, journal/ paper, lecture, project report, photographs, etc

2.Associate metadata with document types

3.Different document formats

• Word, PDF, HTML, PS, etc.

• Non-Latin scripts

3. Document acquisition/ publishing

• Online/ offline

• Central/ distributed

Quality control

4. Indexing and storage

- Automatic metadata extraction - Structured/full text indexing- Data compression

5. Access and delivery

- Structured search, browse, object searching, hierarchical browsing, fine-grained search

- Personalization, customization

6. Access/ rights management

Who can access? What? How much? Usage restrictions

7. Usage monitoring and reporting

Who is using? How much? Uptime? Response time? Recall/Precision? Failures?

8.Preservation: Long term access - Link checks, persistent object identification, content refreshing

9. Scaling up- for large collections

Milestone

Milestone	Tentative Date	KPI
Week 1	23th January-29th January	Community Bonding period Discuss the implementation of project with the mentor or Program Administrator
Week 2	30th January-5th February	Starts coding, setup the development environment
Week 3	6th February-12th February	Continue wring code
Week 4	13th February-19th February	If any changes necessary discuss with team member
Week 6	20th February-26th February	Testing and fixing bugs
Week N	27th February-5th march	Verify all goals and finish working on project

Current state

If I get selected (proposal does not accepted yet)

About me

I am currently a full-stack web developer intern and technical content writer at NiiT looking forward to exploring the tech world I enjoy meeting new people and finding ways to help them have an uplifting experience.

In past, I participated in many cloud events learn to earn, the arcade, and googlecloudready facilitator program, and achieve the ultimate milestone also completing the Architecting with Google Compute Engine Specialization course and Cloud Engineer Professional Certificate on Coursera.Road to google cloud certification

College info – College Of Engineering & Management, Kolaghat

2nd year student [B.Tech in Computer Science and Engineering]

Thank you