19CCE204 Computer Networks Term Work proposal

CCE GROUP 17 - SET 3
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1. *Title of the work:*

    Development and implementation of an integrated web-based office document management system

2. *Problem Statement:*

    To Develop and implement an integrated web-based office document management system for creation, forwarding, rejection/ approval of documents/ files in electronic format with facilities for making sketches, attaching external reference files.
    Domain: Smart Automation

3. *Objectives of the work:*

   - Formulation of a common file/document movement procedure, which can be customized to suit the systems in different departments/sections and Institutions.
   - Development of a web-based integrated platform for creation, forwarding, rejection/ approval of documents/ files in electronic format with facilities for making sketches and attaching external reference files.
   - Customization facility to define the file movement procedure and nomination of designated Officers/ sections.
   - User creation and user rights management Development of user-friendly web-based platforms for managing files under different categories viz. Note sheets for obtaining approvals, leave applications, interoffice notes, Circulars and P&A Office orders.
   - A user-friendly environment similar to popular email platforms enabling us to manage emails under various categories like primary, social, promotional, updates, spam, sent, outbox and inbox.
   - Generation of reports based on files/ documents/information as per requirement.
   - Centralized server with sufficient backbone connectivity, storage space and security.

4. _Methodology:_

Primitive Process:
All the Institutes/ Departments under the Ministry are using some common file/document movement and approval procedures. The physical movement of such files/ documents has many disadvantages.

When a document file is under process of approval, the location of the file document where it has been delayed on the way while moving from table to table, is very difficult to trace. The status of a document/ file which has been initiated is not traceable until it returns back to the parent section/ Office.

Object Model:
- Web server based on HTTP
- Webpage based on React JS
- Database integration based on MongoDB

Process:
- Establish a Centralized server
- Define Storage space for storing files/documents, note sheets, leave applications, interoffice notes, Circulars and P&A Office orders.
- Create a User-friendly environment(webpage) for forwarding, rejection/ approval of documents/ files in e-format
- Creating a movement procedure for the movement of files in the given network with checkpoints at every point

User Experience:
- Log in to the webpage
- Customized profile is displayed
- Files displayed in categories
- File Options:
    - View
    - Creation
    - Forwarding
    - Rejection/Approval
    - Report Generation
    - Movement procedure customization
- Any Process
- Log out

5. _Novelty by team planned:_

Physical files:
- There is every chance of missing files

- Due to natural disasters or mistakes on an individual level, files/ documents may get damaged
- There is a possibility of tampering of documents even after the same has been approved/ closed
- There is wastage of huge amounts of paper and printing expenses
- This procedure also requires attendants/ peons/ MTS personnel for the physical movement of files
- It requires huge space for storing files/record keeping

E-file:
- There is no chance of missing files, even if they are missed, they can be re-transmitted
- Individual cannot access files since they are securely stored in server's database
- Secured protocols ensure prevention of tampering of documents
- There is abundance of storage space, since cloud storage is used
- This procedure does not require attendants/ peons/ MTS personnel for the movement of files

6. *Deliverables:*
- A webpage with a common file/document movement procedure, which suits the systems in different departments/sections and Institutions.
- Features like creation, forwarding, rejection/ approval of documents/ files in electronic format under various categories like primary, social, promotional, updates, spam, sent, outbox and inbox
- Customization facility for higher officials to define the file movement procedure and nomination of designated Officers/ sections.
- Reports based on files/ documents/information

7. *Conclusion:*
A common file/document movement procedure, which can be customized to suit the systems in different departments and Institutions have been formulated and can be used in various government offices which promote digitization, data integrity, security. Development of a web-based integrated platform have helped in creation, forwarding, rejection/ approval of documents/ files in electronic format at ease.

8. *References:*
1. Smart India Hackathon 2022 (sih.gov.in)
2. IBM – Document Management
3. Document Management in Organization
4. Benefits of Document Management Systems (DMS)
5. Good documentation system