

prepare a prototype (flow + structure) for a Document Management System (DMS) based on your detailed workflow (Creator Approver Issuer Controlled Access). -System Flow Chart (process steps) -Module-wise Functionality (dashboard, upload, approval, issuance, access control)-Database Design (sample schema)-User Role Permissions-Technology suggestion for development

Creator Login  
 Upload Word Doc (No header/footer)  
 Approver reviews doc (with header/footer)  
 Decline (add remark)  
 Goes back to Creator  
 doc (header/footer)  
 Issue remark  
 Notify All Users  
 Assign Control Copy NosUsers View/Print Controlled PDF only (No download, traceable by User ID)

Fill Doc Info (ag fields)  
 Send to Approver (Notify)  
 Approve Document  
 Add remarks,  
 select sharing dept.  
 Send to Issuer (MR)  
 Decline (add remark)  
 Convert to PDF (Final)  
 Auto  
 Issuer reviews doc  
 Add  
 Goes back to Creator  
 Issue Final Copy  
 Add

Responsibility: Module-Wise  
 Functional Prototype PlanRoleFeaturesCreatorCreate new document entry, upload Word doc, view pending/returned docs, resubmitApproverView pending approvals, open doc (auto header/footer), approve/reject, add remarks, assign departmentsIssuer (MR)View approved docs, issue/reject, add final remark, track issued documentsUser/RecipientView issued documents (PDF only), print with control footerAdminManage users, roles, departments, track logs, export reportsThere is some conditions: -Auto reminders for revision (based on due period)-Comparison tool (old vs. revised doc)-Version history tracking-Export to Excel logs (per user or document)-QR code footer for authenticity

About Database table

need:usersColumnTypeDescriptionuser\_idINT (PK)Unique usernameVARCHARUser nameemailVARCHARNotification documentsColumnTypeDescriptiondoc\_idINT (PK)Unique documentdoc\_nameVARCHARSOP/Format namedoc\_numberVARCHARUnique doc codedate\_of\_issueDATEIssue daterevision\_noINTRevision countdue\_period\_yearsINTReview reminderprepared\_byINT (FK)Creator IDreason\_revisionTEXTRevision reasonfile\_pathVARCHARUploaded filestatusENUM('Pending','Approved','Declined','Issued')Current statusapprover\_idINT (FK)Assigned approverissuer\_idINT (FK)Assigned issuer document\_logColumnTypeDescriptionlog\_idINT (PK)Log entrydoc\_idINT (FK)Related documentuser\_idINT (FK)Who performed actionactionVARCHARCreated, Approved, Declined, IssuedremarksTEXTAction remarksdate\_timeDATETIMETimestamp

document\_accessColumnTypeDescriptiondoc\_idINT (FK)Documentuser\_idINT (FK)Recipientcontrol\_copy\_noVARCHARAuto serial copy no.view\_accessBOOLEANCan view PDFprint\_accessBOOLEANCan print PDFprint\_dateDATETIMETrack printed date FeatureCreatorApproverIssuerRecipientAdminCreate DocApprove DocIssue DocView PDF (Issued only)View Previous Revisions (Master copy)Export LogsLayerTechnologyFrontend (Web UI)React.js / Next.js (with Role-based Dashboard)Backend APINode.js (Express) or ASP.NET CoreDatabasePostgreSQL / SQL ServerFile StorageLocal folder or AWS S3 / Supabase StorageNotificationsEmail + In-app popup via Socket.io or Supabase RealtimeDocument ConversionLibreOffice / Word API PDF (with watermark + control footer)Audit LoggingAutomatic via middleware (store all user actions)