demo3

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   Fill Doc Info (ag fields) Upload Word Doc (No header/footer)   Send to Approver (Notify) Approver reviews doc (with header/footer)   Approve Document Decline (add remark)   Add remarks, Goes back to Creator   select sharing dept.   Send to Issuer (MR)   Issuer reviews doc (header/footer)   Issue Final Copy   Decline (add remark)   Add Issue remark   Goes back to Creator   Convert to PDF (Final)   Auto Notify All Users   Assign Control Copy NosUsers View/Print Controlled PDF only (No download, traceable by User ID)---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 nameroleENUM('Creator','Approver','Issuer','User','Admin')RoledepartmentVARCHARDept 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)