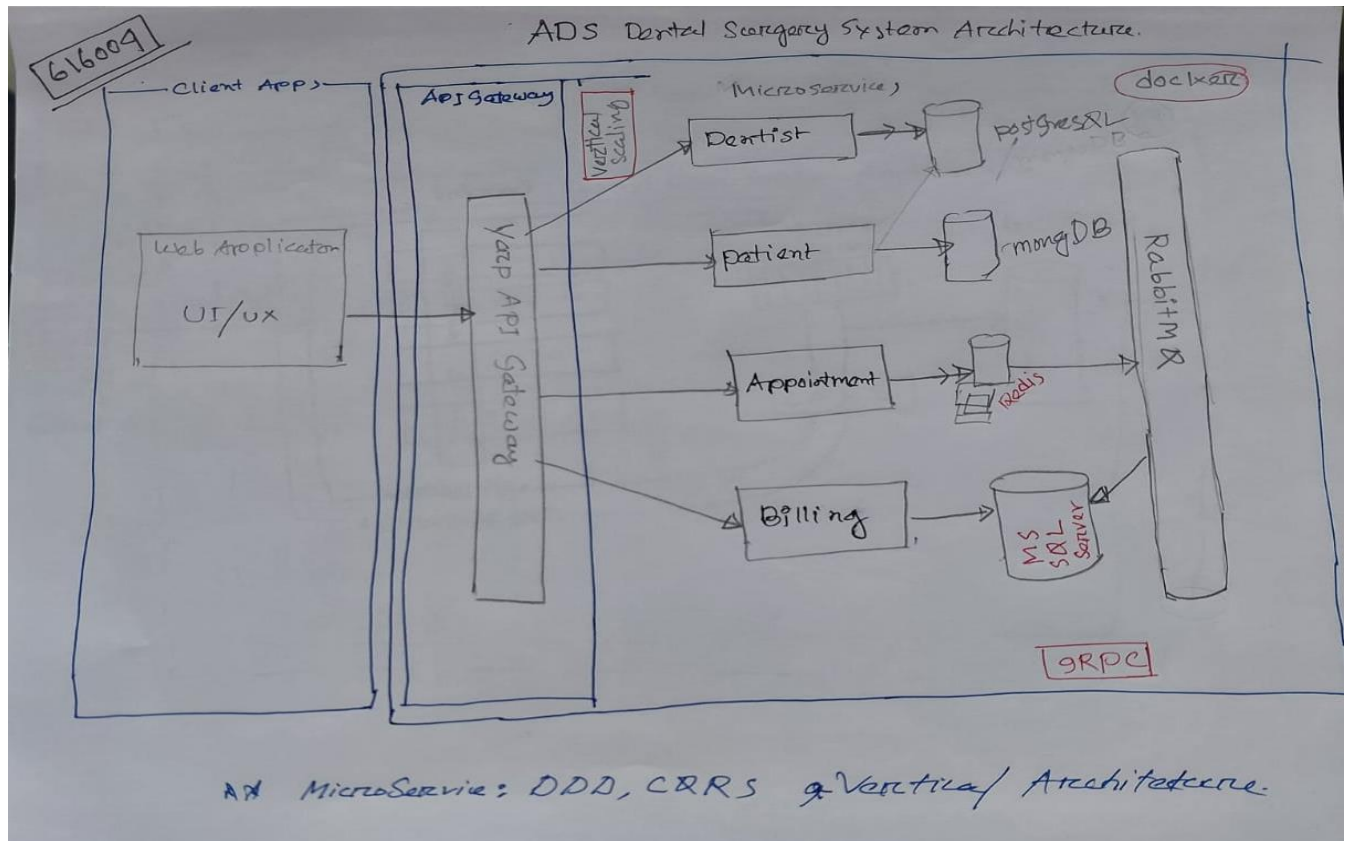
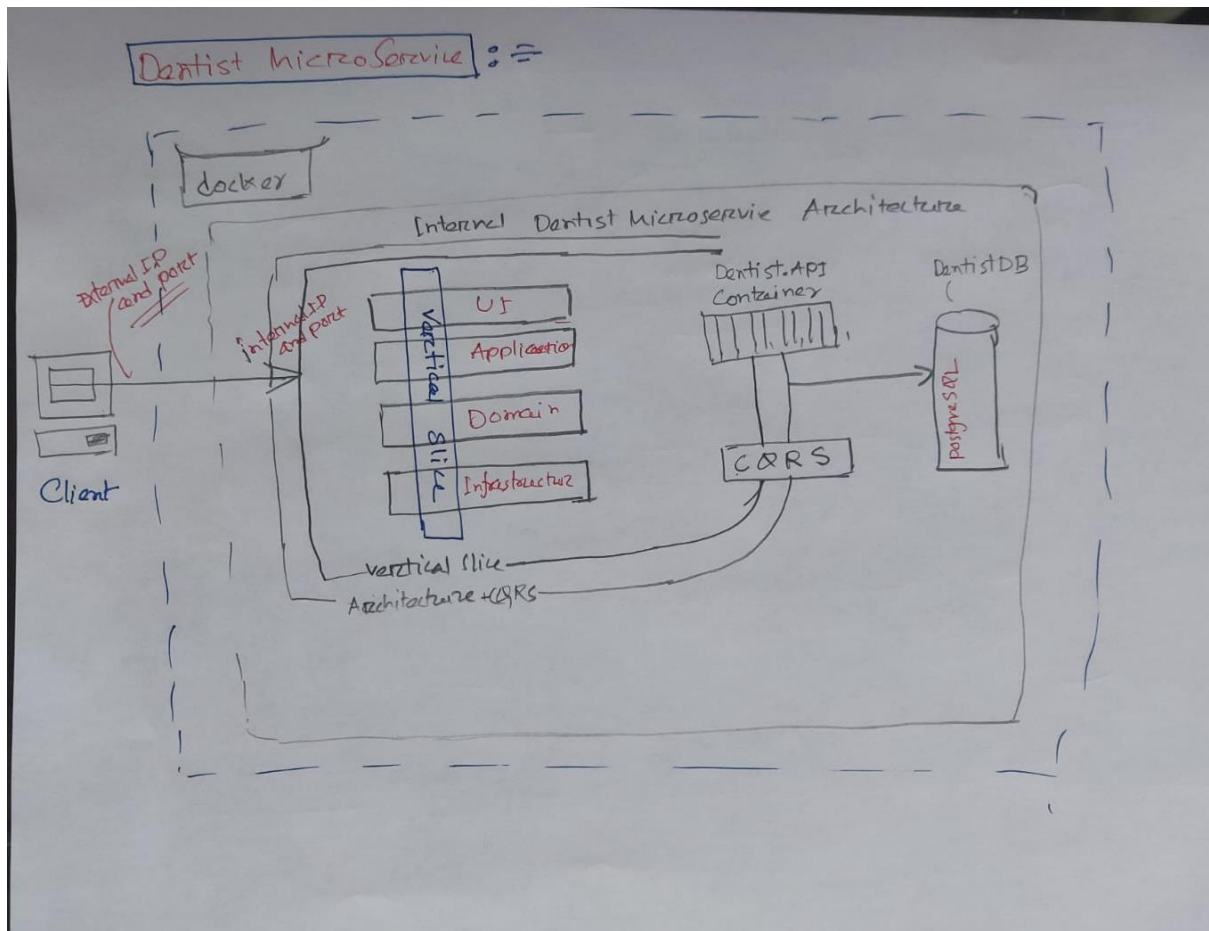


## Software solution architecture diagram for the ADS Dental Surgery system





#### User Interface:

Component: Web Application

Technology: HTML, CSS, JavaScript (Angular)

#### API Gateway:

Component: Gateway for routing requests to appropriate microservices

Technology: Yarp Gateway

#### Microservice Architecture:

Components: Dentist Service, Patient Service, Appointment Service, Billing Service

Technology: ASP.NET Core Web API with .NET 8

#### Messaging with RabbitMQ:

Component: Message broker for asynchronous communication between microservices

Technology: RabbitMQ

**Inter-Service Communication with gRPC:**

Component: High-performance RPC framework for inter-service communication

Technology: gRPC

**Caching with Redis:**

Component: In-memory data store for caching frequently accessed data

Technology: Redis

**Database:**

Component: Backend database for storing application data

Technology: SQL Server, PostgreSQL and MongoDB