

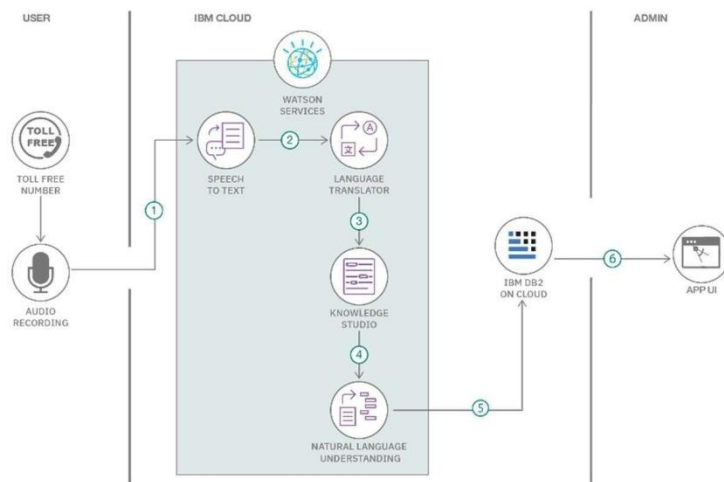
Project Design Phase-II TechnologyStack(Architecture&Stack)

Date	July2025
TeamID	LTVIP2025TMID44695
ProjectName	ResolveNow:YourPlatformforOnlineComplaints
MaximumMarks	4 Marks

TechnicalArchitecture:

TheDeliverable shallinclude the architecturaldiagramasbelowand the informationasper the table1 &table2 Example:Order processing during pandemics for offline mode

Reference:<https://developer.ibm.com/patterns/ai-powered-backend-system-for-order-processing-during-pandemics/>



Guidelines:

Includealltheprocesses(Asanapplicationlogic/
Technology Block)

Provide infrastructural demarcation (Local / Cloud)

Indicate external interfaces (third partyAPI's etc.)Table-1 :
Components & Technologies:

Indicate Data Storage components / services

Indicateinterfacetomachinelearningmodels (if

Table-2:ApplicationCharacteristics:applicable)

S.No	Component	Description	Technology
1	UserInterface	Howuserinteractswiththeapplication(e.g.,WebUI)	HTML,CSS,JavaScript,React.js
2	ApplicationLogic-1	Userregistrationandloginprocess	Node.js,Express.js
3	ApplicationLogic-2	Complaintsubmissionandtracking	Node.js,Express.js
4	ApplicationLogic-3	Real-timechatbetweenuserandagent	Socket.io(optional),Express.js
5	Database	Storescomplaint,user,agentdata	MongoDB
6	Cloud Database	Cloud-hostedscalabledatabase	MongoDBAtlas
7	File Storage	Storeuser-uploadedcomplaintimages	MongoDBGridFS/Base64(optional)
8	ExternalAPI-1	Emailservicefornotifications	Nodemailer
9	ExternalAPI-2	OTPverification(ifimplemented)	Twilio/FirebaseOTP
10	MachineLearningModel	(Notusedcurrently,optional)	(N/A)
11	Infrastructure(Server/Cloud)	Localdevelopmentenvironment	Node.jsserver,localhost

S.No	Characteristics	Description	TechnologyUsed
1	Open-Source Frameworks	Useoffree,community-maintainedframeworks	React.js,Node.js,Express.js
2	SecurityImplementations	Passwordhashing,secureMongoURI,role-basedaccess	bcrypt.js,dotenv
3	ScalableArchitecture	Modularfrontend/backend,MongoDBAtlasandlesscaling	Express.js,MongoDBAtlas
4	Availability	Canbedeployedoncloudserversorlocalserversfor24/7 availability	MongoDBAtlas,Vercel (optional)
5	Performance	RESTAPIs,optimizedfrontend,lazyloading	Axios,React.js,Express.js

References:

<https://c4model.com/> <https://developer.ibm.com/patterns/online-order-processing-system-during-pandemic/> <https://www.ibm.com/cloud/architecture> <https://aws.amazon.com/architecture> <https://medium.com/the-internal-startup/how-to-draw-useful-technical-architecture-diagrams-2d20c9fda90d>