Project Design Phase-IITechnologyStack(Architecture&Stack)

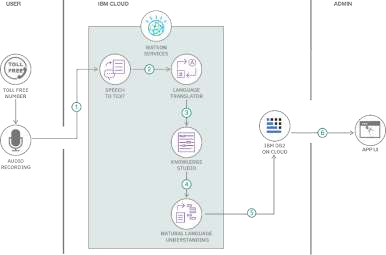
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| --- | --- |
| Date | 21 September 2023 |
| TeamID | NM2023TMID05015 |
| ProjectName | GlobeTrek Insights: Navigating Global Country Data With IBM Cognos |
| MaximumMarks | 4 Marks |

# TechnicalArchitecture:

TheDeliverable shallincludethearchitecturaldiagramasbelowandtheinformationasperthetable1&table2

# Example:Orderprocessing duringpandemicsforofflinemode

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



Guidelines:

1. Includealltheprocesses(Asanapplicationlogic/TechnologyBlock)
2. Provideinfrastructuraldemarcation(Local/Cloud)
3. Indicateexternal interfaces(thirdpartyAPI’setc.)
4. IndicateDataStoragecomponents/services
5. Indicateinterfacetomachine learningmodels(ifapplicable)

# Table-1:Components& Technologies:

|  |  |  |  |
| --- | --- | --- | --- |
| **S.No** | **Component** | **Description** | **Technology** |
| **1** | **Data Source** | **IBM Db2** | **RelationalDatabase** |
| **2** | **DataAnalysisandVisualization** | **IBMCognosAnalytics** | **BusinessIntelligence(BI)Tool** |
| **3** | **DataIntegration** | **IBM Db2Connect** | **DataIntegrationSoftware** |
| **4** | **DataSecurity** | **RBAC,DataEncryption** | **SecurityMechanisms** |
| **5** | **Reportingand Dashboarding** | **IBMCognosDashboards** | **ReportingandDashboarding Tool** |
| **6** | **DataQualityAssurance** | **DataCleaningandTransformationTools** | **ETLTools(e.g.,Informatica)** |
| **7** | **Project Management** | **ProjectManagementSoftware(e.g., Jira, Trello)** | **ProjectManagementTools** |
| **8** | **DataStorage** | **IBM Db2** | **RelationalDatabase** |
| **9** | **Complianceand Data Privacy** | **GDPRComplianceToolsandPolicies** | **ComplianceSoftware** |
| **10** | **MarketingCampaignManagement** | **Marketing Automation Tools (e.g., HubSpot,Marketo)** | **MarketingSoftware** |
| **11** | **CustomerFeedbackCollection** | **FeedbackForms,Surveys** | **DataCollectionTools** |
| **12** | **CustomerSupport** | **CRMSoftware(e.g.,Salesforce,Zendesk)** | **Customer Relationship Management(CRM)Software** |
| **13** | **CollaborationandCommunication** | **TeamCollaborationTools(e.g.,Slack,MicrosoftTeams)** | **CollaborationTools** |
| **14** | **BudgetManagement** | **Financial Software(e.g.,QuickBooks,Xero)** | **FinancialSoftware** |
| **15** | **ITInfrastructure** | **Server and NetworkInfrastructure** | **ITInfrastructure** |
| **16** | **User Training** | **TrainingMaterials,Workshops** | **Training Resources** |
| **17** | **Data BackupandRecovery** | **DataBackupSystems** | **Backupand RecoverySolutions** |
| **18** | **Data Monitoring** | **DataMonitoringTools** | **MonitoringSoftware** |
| **19** | **AnalyticsTools** | **Advanced AnalyticsTools(e.g.,Python,R)** | **AnalyticsSoftware** |
| **20** | **MarketingTools** | **DigitalMarketingSoftware(e.g.,Google Ads,FacebookAds)** | **MarketingSoftware** |

**Table-2:ApplicationCharacteristics:**

|  |  |  |  |
| --- | --- | --- | --- |
| **S.No** | **Characteristics** | **Description** | **Technology** |
| **1** | **Scalability** | **The application should be able to scale withgrowing data anduserdemands.** | **ScalableArchitecture** |
| **2** | **Performance** | **Theapplicationmustprovidefastdataanalysisandreporting.** | **PerformanceOptimization** |
| **3** | **Security** | **Data security and privacy are critical aspects oftheapplication.** | **SecurityFeatures** |
| **4** | **User-Friendly** | **The application should be intuitive for userswithvarying technicalbackgrounds.** | **User-FriendlyInterface** |
| **5** | **Real-TimeInsights** | **Users should have access to real-timemarketingcampaigninsights.** | **Real-TimeProcessing** |
| **6** | **Data Accuracy** | **The application must ensure data accuracy forinformeddecision-making.** | **DataValidation** |
| **7** | **IntegrationCapabilities** | **The application should integrate seamlesslywithvariousdatasources andtools.** | **IntegrationAPIs** |
| **8** | **Compliance** | **Compliance with data privacy regulations likeGDPRisessential.** | **ComplianceFeatures** |
| **9** | **Collaboration** | **Users should be able to collaborate and shareinsightswithintheapplication.** | **CollaborationTools** |
| **10** | **Mobility** | **The application should be accessible on mobiledevicesforon-the-go analysis.** | **MobileCompatibility** |