**Project Design Phase-II**
**Technology Stack (Architecture & Stack)**

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|---|---|
| Date | 09 October 2022 |
| Team ID | PNT2022TMI39684 |
| Project Name | Smart Lender Applicant Credibility Prediction for Loan Approval |
| Maximum Marks | 4 Marks |

**Technical Architecture:**

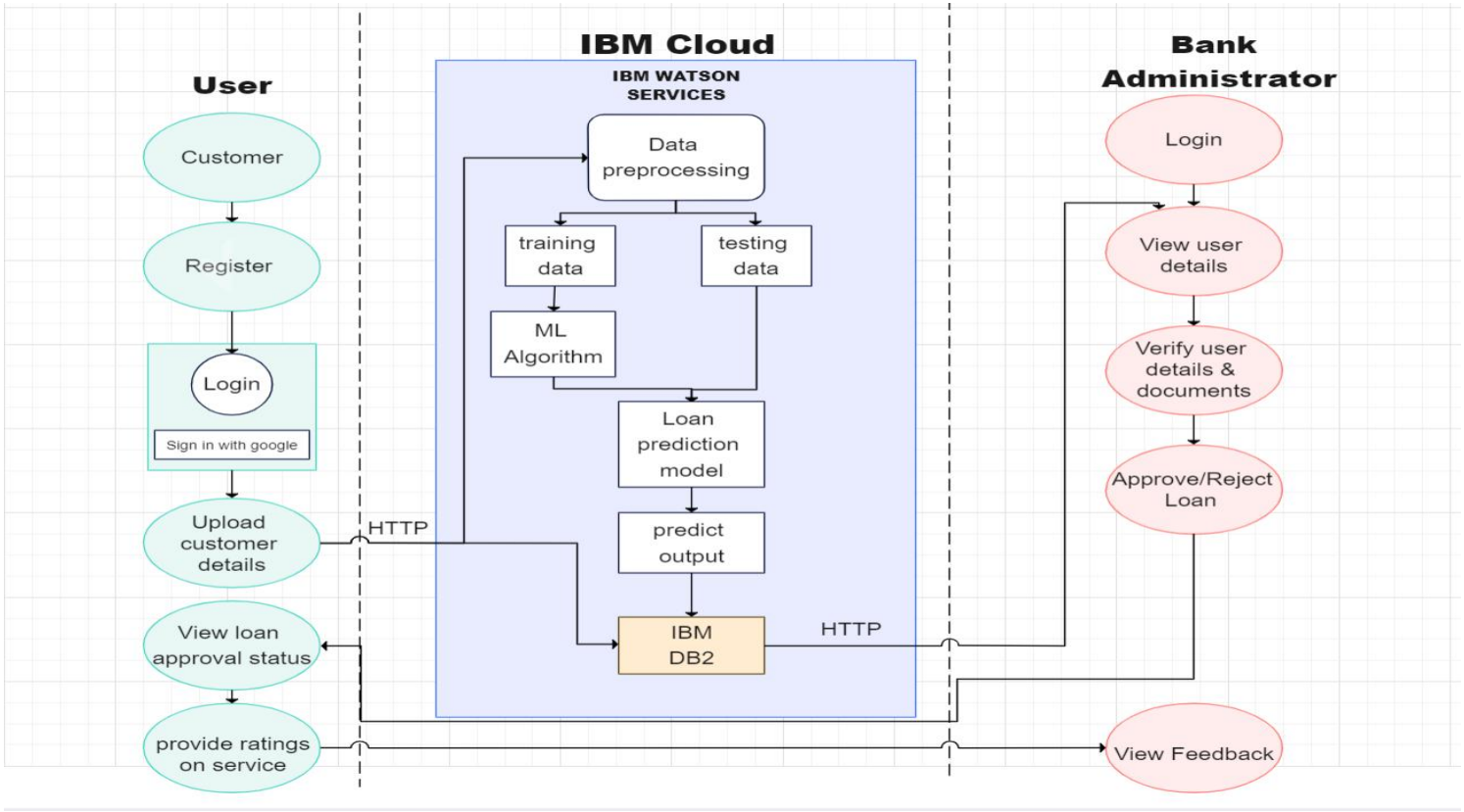

**Table-1 : Components & Technologies:**

| S.No | Component | Description | Technology |
|---|---|---|---|
| 1. | User Interface | Web UI -Customer UI,Bank Admin UI,Loan approval UI | HTML, CSS, JavaScript |
| 2. | Registration | User register with their credentials | HTML,CSS ,JavaScript,PHP,Bootstrap |
| 3. | Login | User login with their username and password and bank login with their credentials | HTML,CSS,JavaScript |
| 4. | Upload user details and documents | The customer will upload their personal details,Loan details and documents | JavaScript,PHP |
| 5. | Bank Verification | Bank will verify the details of the customer and documents | PHP |
| 6. | Loan Approval status | The Loan prediction model gives the eligibility of loan and the bank admin will give the loan approval status | Python,JavaScript |
| 7. | Ratings and Reviews | User provide their feedback | JavaScript |
| 8. | Database | Data type -String,Integer,Float,Boolean<br>RDBMS database<br>Stores user details,review details,document details | MySQL |
| 9. | Cloud Database | Platform as a service<br>Used to store,analyze and retrieve the data<br>Configuration:<br>Abort-slave-event-count 0<br>Allow-suspicious-udfs false<br>Archieve on<br>Auto-increment-increment 1<br>Auto-increment-offset 1<br>Autocommit True<br>Automatic-sp-priviliges True<br>Avoid-temporal-upgrade False<br>Back-log 80<br>/home/jon/bin/mysql -8.0/<br>…...<br>Tmpdir /tmp | IBM DB2(MYSQL online) |

| | | | |
|---|---|---|---|
| | | Transaction-alloc-block-size 8192<br>Transaction-isolation REPEATABLE-READ<br>Transaction-prealloc-size 4096<br>Transaction-read-only FALSE<br>Transaction-write-set-extraction XXHASH64<br>Updatable-views-with-limit YES<br>Validate-user-plugins TRUE<br>Verbose TRUE<br>Wait-timeout 28800 | |
| 10. | File Storage | Network File Storage | IBM Cloud object storage<br>IBM Watson studio |
| 11. | Sign in | User login with google | Google API |
| 12. | Machine Learning Model | To predict the Loan approval status of the user | Python,IBM Watson Service |
| 13. | Infrastructure | Cloud Server Configuration:<br>Speed<br>Feature flag<br>Central configuration storage<br>Virtual processors 2vcpu<br>RAM 8GB<br>Storage 100GB | IBM Cloud Server |

**Table-2: Application Characteristics:**

| S.No | Characteristics | Description | Technology |
|---|---|---|---|
| 1. | Open-Source Frameworks | Bootstrap<br>Flask<br>Scikit,numpy. | HTML,CSS JavaScript<br>Python |

| S.No | Characteristics | Description | Technology |
|---|---|---|---|
| 2. | Security Implementations | Captcha Security | JavaScript |
| | Scalable Architecture | 3-tier architecture | HTML,CSS,JavaScript<br>Python<br>IBM D2 |
| 3. | Availability | Single server | IBM cloud server |
| 4. | Performance | More Accurate Prediction<br>Cookie Free Domain | Python |