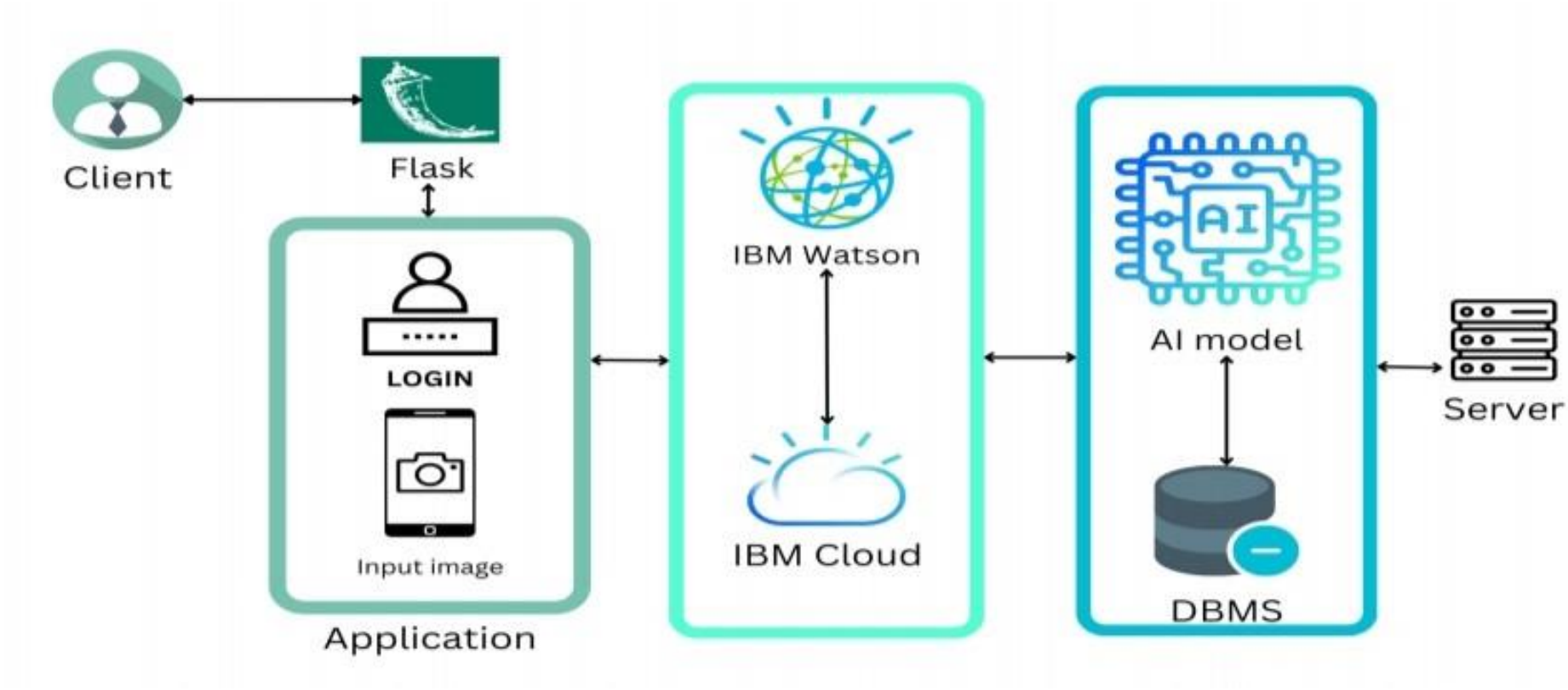
Project Design Phase-II
Technology Stack (Architecture & Stack)

Date	14 October 2022
Team ID	PNT2022TMID38414
Project Name	Intelligent Vehicle Damage Assessment and Cost Estimation for Insurance Companies
Maximum Marks	4 Marks

Technical Architecture:



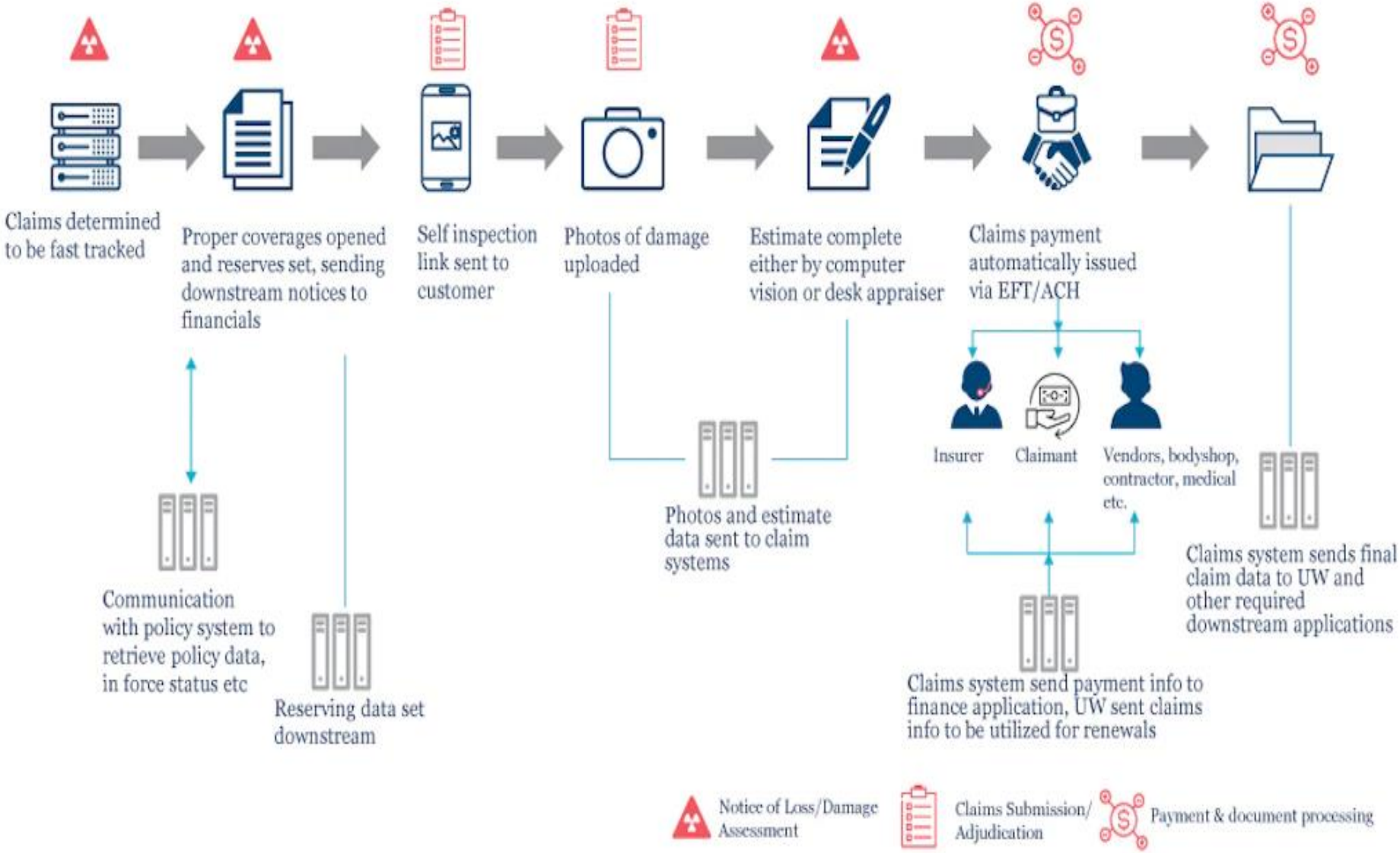

Claims determined to be fast tracked
Proper coverages opened and reserves set, sending downstream notices to financials
Self inspection link sent to customer
Photos of damage uploaded
Estimate complete either by computer vision or desk appraiser
Claims payment automatically issued via EFT/ACH
Insurer
Claimant
Vendors, bodyshop, contractor, medical etc.
Communication with policy system to retrieve policy data, in force status etc
Reserving data set downstream
Photos and estimate data sent to claim systems
Claims system sends final claim data to UW and other required downstream applications
Claims system send payment info to finance application, UW sent claims info to be utilized for renewals
Notice of Loss/Damage Assessment
Claims Submission/ Adjudication
Payment & document processing

Table-1 : Components & Technologies:

S.No	Component	Description	Technology
1.	User Interface	The user interacts with the web UI application	HTML, CSS, Python
2.	Application Logic-1	Getting user input image	Python
3.	Application Logic-2	Getting model output for damage prediction	IBM Watson, Python
4.	Application Logic-3	Getting model output for cost estimation	IBM Watson, Python
5.	Database	Data Type – Images and user inputs details are stored	MySQL, Js, IBM DB2
6.	Cloud Database	Database Service on Cloud	IBM DB2, IBM Cloudant etc.
7.	File Storage	Received user details and received user input images of the vehicle is stored in cloud	IBM Block Storage, IBM cloud
8.	Machine Learning Model	Purpose of the AI Model is for estimating the cost of the damaged vehicle.	Object Recognition Model, and CNN based model for damage estimation
9.	Infrastructure (Server / Cloud)	On cloud server we will be deploying the AI Model using flask in the web page	Python Flask

Table-2: Application Characteristics:

S.No	Characteristics	Description	Technology
1.	Open-Source Frameworks	Open-source frameworks used is IBM Watson	Technology of Open Source framework- IBM Watson
2.	Security Implementations	IBM Cloud	Certified Watson assistant for Encrypted file systems, Encrypted storage systems, Key management systems.
3.	Scalable Architecture	Web server - static and dynamic website content present in the website will be update based uponuser demands and suggestion Application server - updation of the basic functionality of the website and integration of newlogic within the website can be done Database server - based upon the varying inputsgiven by the user the database will be modified constantly	IBM Watson Assistant, Python, MySQL
4.	Availability	The AI model is made available instantly to user at any point of time	IBM Watson Cloud assistance
5.	Performance	IBM Watson –automate processes, The deep learning model is trained using IBM Watson studio for better performance and quick accessibility .	IBM Watson Assistant