Date	29 0CTOBER 2022
Team ID	PNT2022TMID29580
Project Name	AI-based localization and classification of skin disease with erythema
Maximum Marks	4 Marks

Technical Architecture:

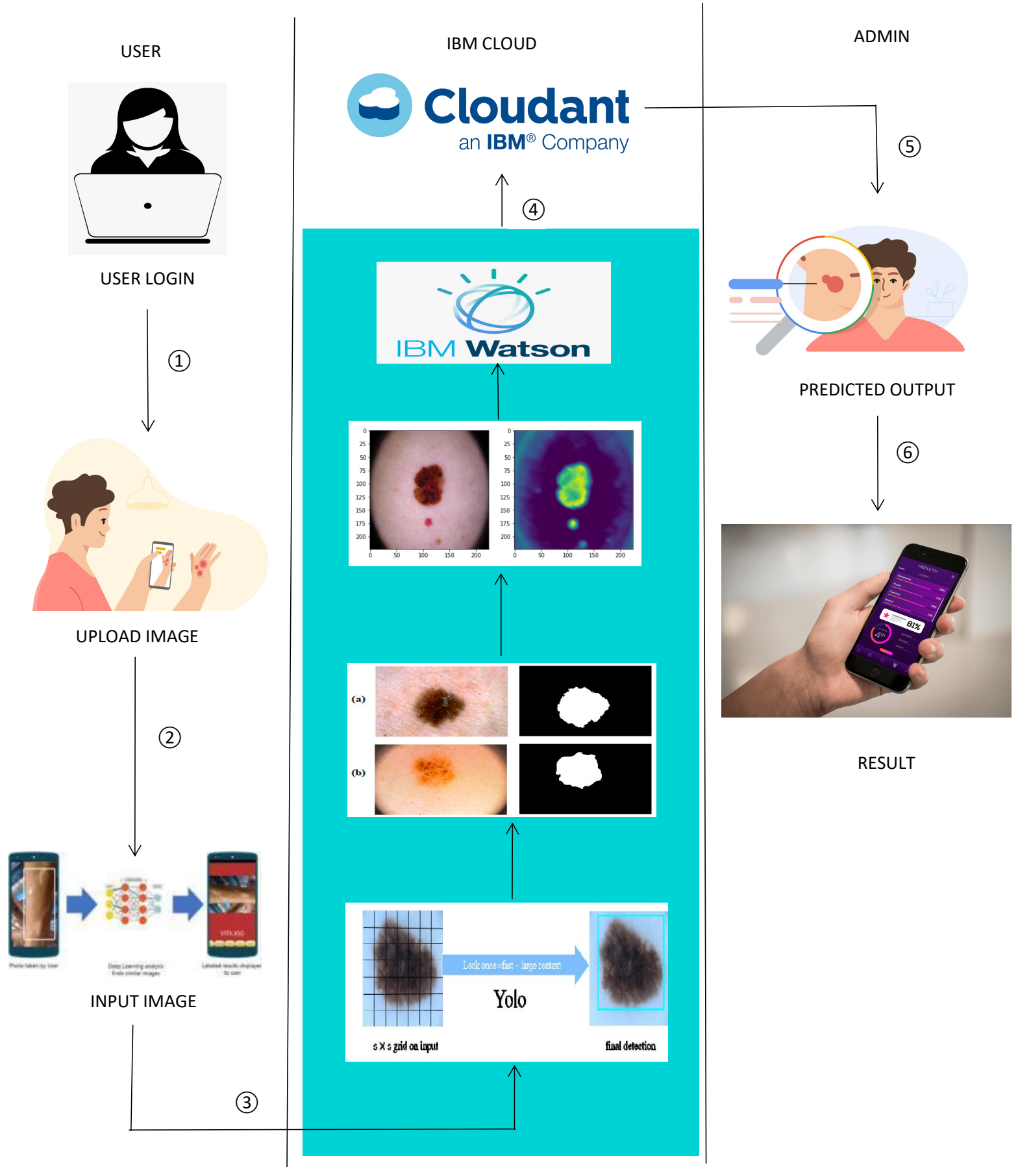

Table-1 : Components & Technologies:

S.NO	Component	Description	Technology
1	User Interface	The user interact through the website to the application .	HTML
2	Image Processing	Image processing techniques help to build automated screening system for dermatology at an initial stage	Python
3	Disease Prediction	An image of diseased skin is given as input to the disease detection system. Using the image prediction in done with data-set.	Python
4	Alleviate	When the disease is predicted , the suggestions are given to the user.	Python, IBM Watson Assistant
5	Database	Images of the skin disease are stored in the database	MySQL, NoSQL, etc.
6	Cloud Database	The model is deployed in the IBM cloud.	IBM DB2, IBM Cloudant etc.
7	File Storage	Images files are stored in database with the high resolution and with the type names	IBM Block Storage or Other Storage Service or Local Filesystem
8	External API-1	Predicted output is visible through the application	Predicted type of the skin disease
9	YOLO Model	It is used in image identification ,colour filtering and image segmentation	Image pre-processing model, Disease Prediction model
10	Infrastructure (Server / Cloud)	Application Deployment on Local System / Cloud	IBM cloud

Table-2: Application Characteristics:

S.no	Characteristics	Description	Technology
1	Open-Source Frameworks	Google Collaboratory, Jupyter Notebook, Googledrive, Python Flask.	OpnenCV
2	Security Implementations	Assuring all data inside the system or its part will be protected against malware attacks or unauthorized access.	Encryption
3	Scalable Architecture	The website and app should be scalable. The architecture is a 3- tier model.	Python Flask, IBM cloud
4	Availability	The system will be available up to 95% of the time.	IBM cloud
5	Performance	Response Time and Net Processing Time is fast.	IBM cloud

References:

https://www.nature.com/articles/s41598-021-84593-z

https://pubmed.ncbi.nlm.nih.gov/33674636/#:~:text=Given%20an%20image%20of%20the,information%20to%20a%20classification%20model.

https://www.researchgate.net/publication/349833613_AI-based_localization_and_classification_of_skin_disease_with_erythema

https://europepmc.org/article/med/36072725