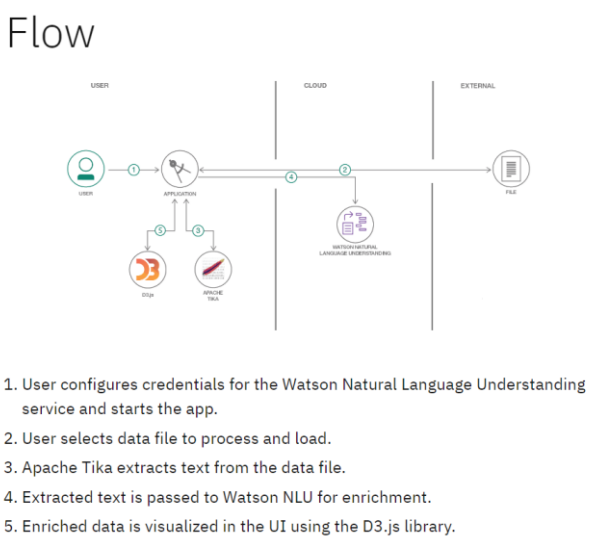
Project Design Phase-II
Data Flow Diagram & User Stories

Date	23 October 2022
Team ID	PNT2022TMID09888
Project Name	A NOVEL METHOD FOR HANDWRITTEN DIGIT RECOGNITION SYSTEM
Maximum Marks	4 Marks

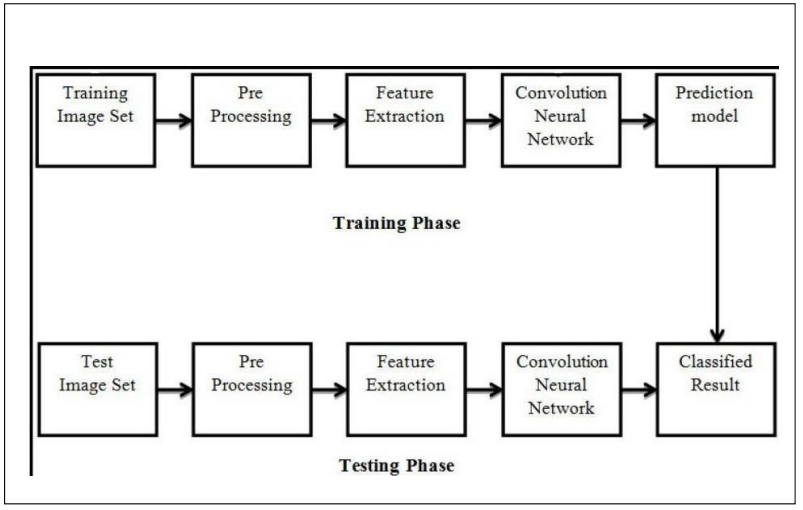
Data Flow Diagrams:

A Data Flow Diagram (DFD) is a traditional visual representation of the information flows within a system. A neat and clear DFD can depict the right amount of the system requirement graphically. It shows how data enters and leaves the system, what changes the information, and where data is stored.

Example: (Simplified)



Example: DFD Level 0 (Industry Standard)



User Stories

User Type	Functional Requirement (Epic)	User Story Number	User Story I Task	Acceptance criteria	Priority	Release
Customer (Web user)	Home	USN-1	In the Home Page, I can view the guidelines of how to use the website	I can view the guidelines	low	Sprint-1
	Dashboard	USN-2	As a user, I can see Home Page & Prediction Page	I can access the dashboard	Low	Sprint-2
	Choose Input	USN-3	In Prediction Page, I can upload an image of handwritten digit for prediction	I can upload my input by browsing the device storage	Medium	Sprint-3
		USN-4	As a user, I can get an accuracy rate with the prediction	I can get different forms of output	High	Sprint-4
	Recognize	USN-5	As a user, I can see that the GUI processing the input using trained model	I can perform handwritten digit prediction	High	Sprint-1
	Prediction	USN-6	As a user, I can get accuracy rate by pressing the predict button	I can get the accuracy of the output	Medium	Sprint-1
Customer (Mobile user)	Home	USN-7	As a user, I can access application in mobile phone	I can access the dashboard with mobile	Medium	Sprint-1
	Recognize	USN-8	I can upload input and retrieve output with accuracy by using the mobile	I can upload input image and get output with a mobile device	High	Sprint-2

Transcription analyst	Pre Processing	USN-1	Noise in the digital handwritten image can be reduced.	It uses noise filters.	High	Sprint-1
		USN-2	Blurred image can be modified.	Sobel filter can be used to sharpen the image.	High	Sprint-3
	Feature Extraction	USN-3	How the features can be identified.	By extracting the foreground image from background image.	Low	Sprint-2
		USN-4	How shape edges can be detected.	Curves of the letters can be found.	Medium	Sprint-1
		USN-5	How words are recognized based on sizes.	By identifying the size of the word.	High	Sprint-3
	Prediction	USN-6	How letters are predicted.	By comparing the features of each letter with the features of actual letters.	High	Sprint-4

		USN-7	How capital and small letters identified.	By separating bigger font images with smaller font images.	Low	Sprint-2
	Classified result	USN-8	How the prediction seperates the identification of the digital letter.	It seperates as correctly predicted image and wrongly predicted image.	Medium	Sprint-4
		USN-9	How the words are predicted.	Once the letters are correctly predicted it uses a dictionary to identify the words.	High	Sprint-1