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Aim:- Provide a feasible solution to the existing problems in the Health care sector.

- Reduce the OPD queues.
- Save the time of patients.
- Save the time of doctors.

We plan to make a clinical trial web application which takes as input the health parameters of a person through a simple form.

Based on the existing dataset, we have planned to make a "logistic regression" model which will predict the most likely disease a person can have based on the health parameters whose value can be easily known by some methods.

We use "One vs. All" method to classify between various diseases.
We will train our logistic regression classifier for multi-class classification.

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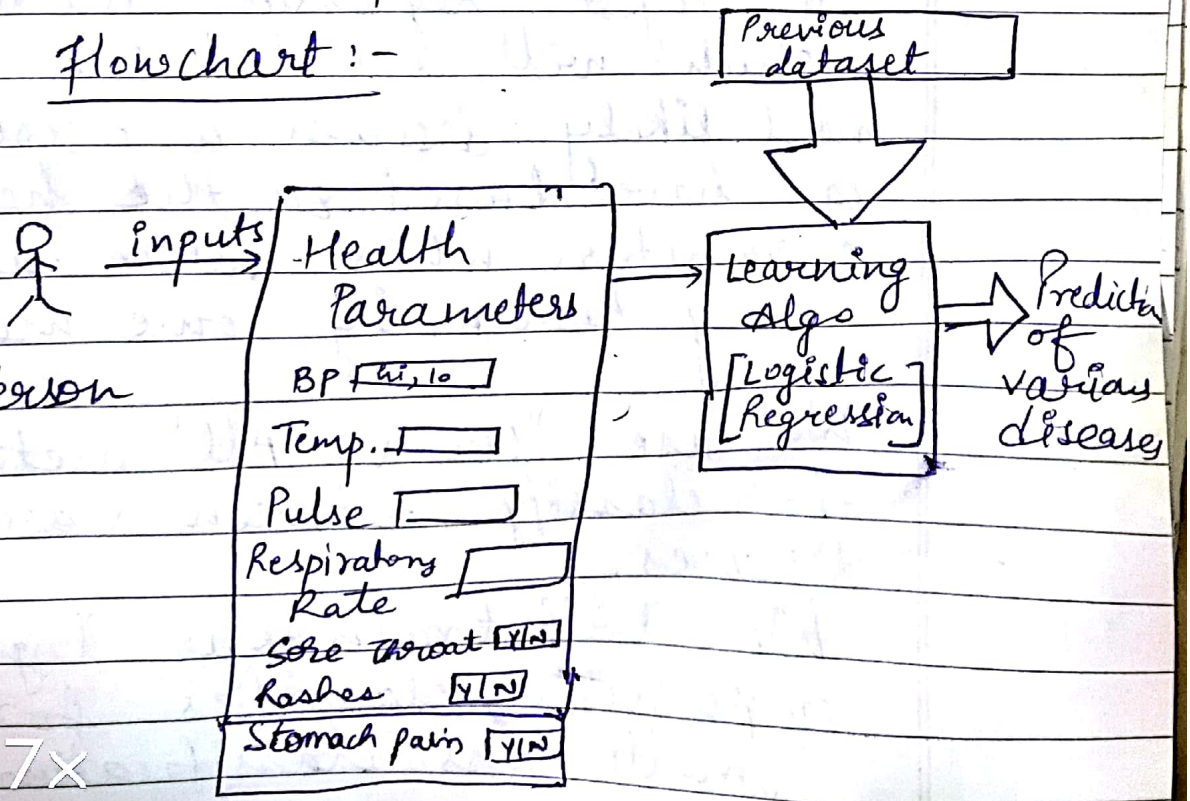
The dataset has been prepared by us. ~~as finding such a dataset was not~~ We couldn't find such a database which has all "general" health parameters which could be used for prediction.

Now, the OPD queues will be reduced as the person who knows what disease he is likely having will go directly to ward or go to general physician based upon his condition.

Flowchart :-



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We are right now able to predict 6 conditions of a person namely:-

1. Healthy
2. Fever
3. Flu
4. Typhoid
5. Hypertension
6. Hypotension

Web App

Input health paramet

DATABASE

Previous dataset [based on our talk with doctor]

LEARNING ALGO (logistic regression)

Predict:-
0 - Healthy
1 - Fever
2 - Flu
3 - Typhoid
4 - Hypertension
5 - Hypotension

Needs to be admitted

OPD

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Technologies Used :-

For Web App :-

Framework - Django - 1.11.8

Language - Python 3.6.3

Extra Packages used - Bootstrap 3.

For Machine Learning :-

Python libraries :-

- numpy
- matplotlib
- pandas → [for dataset manipulation]

sklearn

- sklearn.cross-validation (for splitting data)
- sklearn.metrics (for confusion matrix) → for our reference.
- sklearn.linear_model (for logistic Regression)