

## 8.3 FUNCTIONAL DESIGN (SCREEN SHOTS)

### HOME PAGE

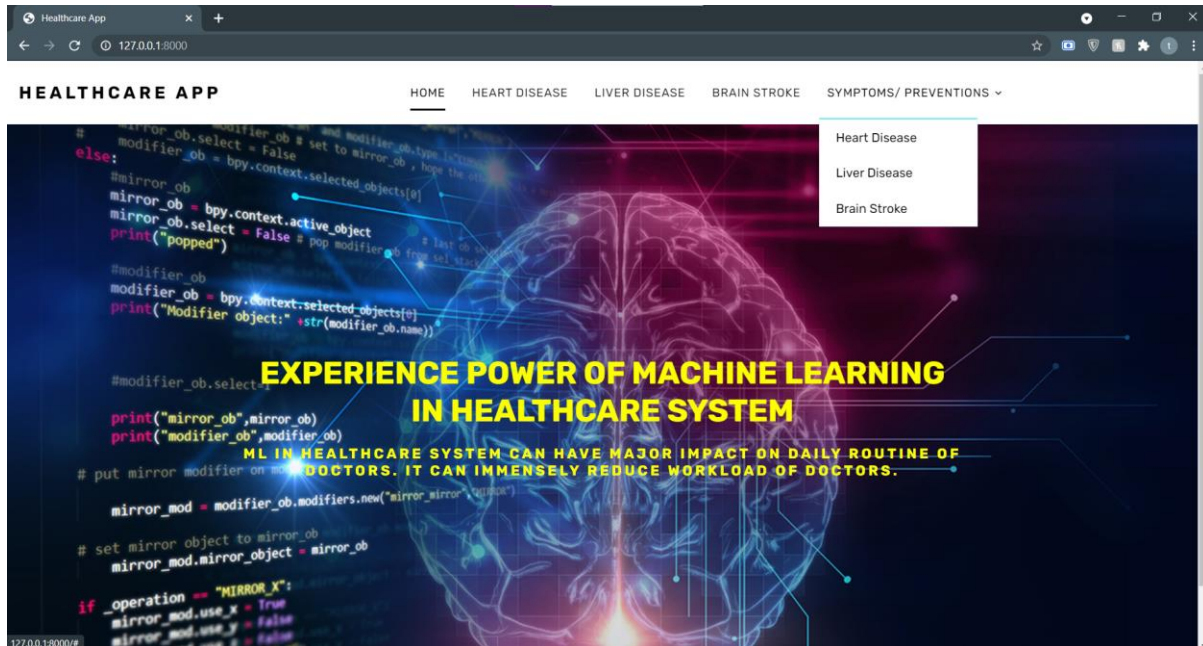


Figure 6: Healthcare app home page

### HEART DISEASE:

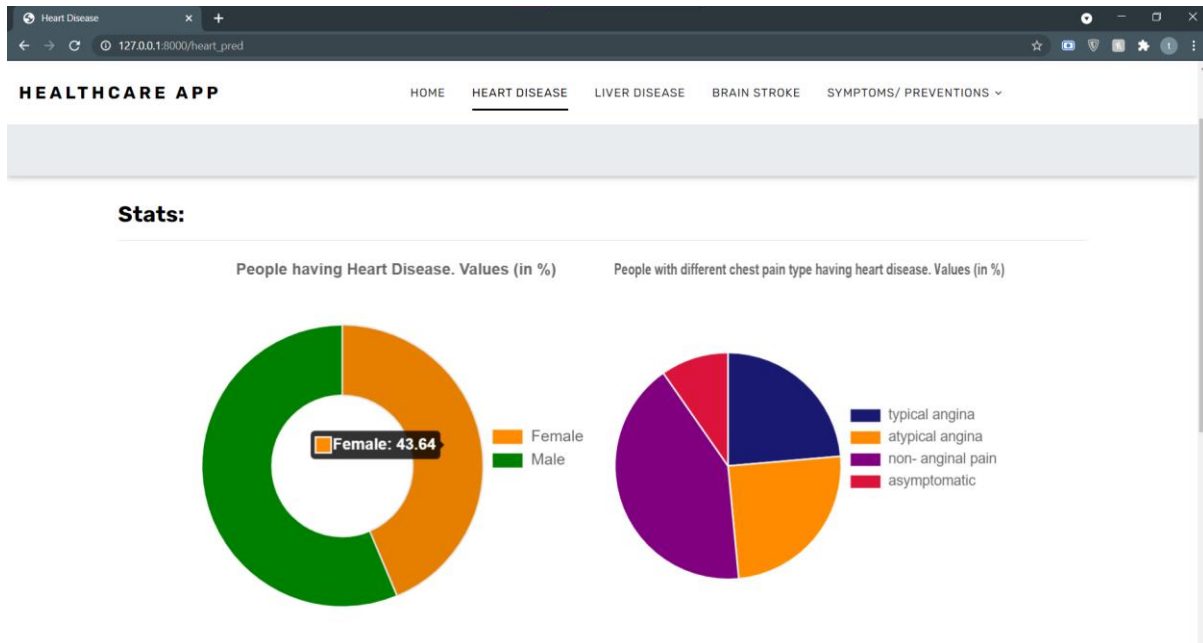


Figure 7.a: Heart disease graphs

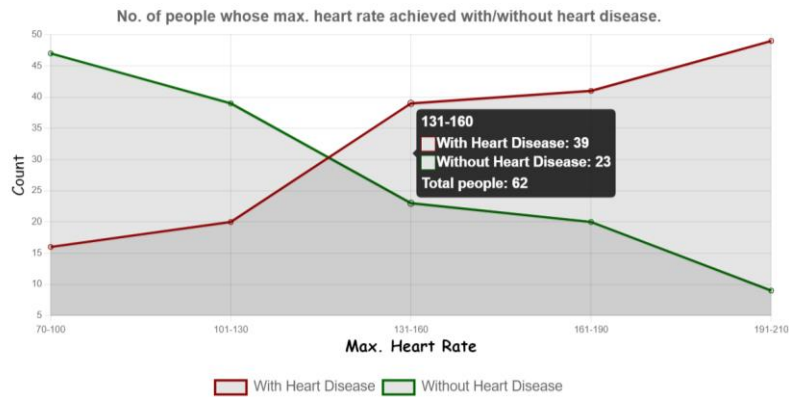


Figure 7.b: Line graph

## HEART DISEASE PREDICTION:

HEALTHCARE APP

HOME HEART DISEASE LIVER DISEASE BRAIN STROKE SYMPTOMS/ PREVENTIONS

Want to predict if you have heart disease? [Click Here](#)

**Stats:**

Heart Disease Prediction

Age: 42 Cholesterol: 180 Exercise Induced Angina: No

Sex: Male Fasting Blood Pressure: False ST Depression: 0

Chest Pain Type: Non-Anginal Pain Rest ECG: ST-T wave abnormality Slope: Flatsloping

Rest Blood Pressure: 130 Maximum Heart Rate Achieved: 150 Number of Major Vessels: 0 (Vessels colored by flourosopy)

Thalium Stress Result: Fixed defect

GET PREDICTIONS

Figure 7.c: Heart Disease Prediction Modal

HEALTHCARE APP

HOME HEART DISEASE LIVER DISEASE BRAIN STROKE SYMPTOMS/ PREVENTIONS

Want to predict if you have heart disease? [Click Here](#)

**Predictions**

Sorry! You may have heart disease. Please consult a doctor.  
[View Symptoms and Preventions](#)

**\*\* Note : Accuracy of predictions: 93.4 %**

Figure 7.d: Predictions result

## LIVER DISEASE:



Figure 8.a: Liver Disease page

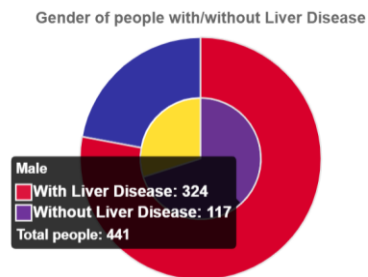


Figure 8.b: Pie Chart

**HEALTHCARE APP**

HOME HEART DISEASE **LIVER DISEASE** BRAIN STROKE SYMPTOMS/ PREVENTIONS

Want to predict if you have liver disease? [Click Here](#)

**Stats:**

No. of people of different age group with/without Liver Disease

**Liver Disease Prediction**

Age:  Direct Bilirubin:  Aspartate Aminotransferase:

Gender:  Alkaline Phosphatase:  Total Proteins:

Total Bilirubin:  Alamine Aminotransferase:  Albumin:

Albumin and Globulin Ratio:

**GET PREDICTIONS**

Figure 8.c: Liver Disease Prediction Modal

**HEALTHCARE APP**

HOME HEART DISEASE **LIVER DISEASE** BRAIN STROKE SYMPTOMS/ PREVENTIONS

Want to predict if you have liver disease? [Click Here](#)

**Predictions**

You don't have liver disease

[View Symptoms and Preventions](#)

**\*\* Note : Accuracy of predictions: 84.0 %**

Figure 8.d: Predictions result

# BRAIN STROKE:

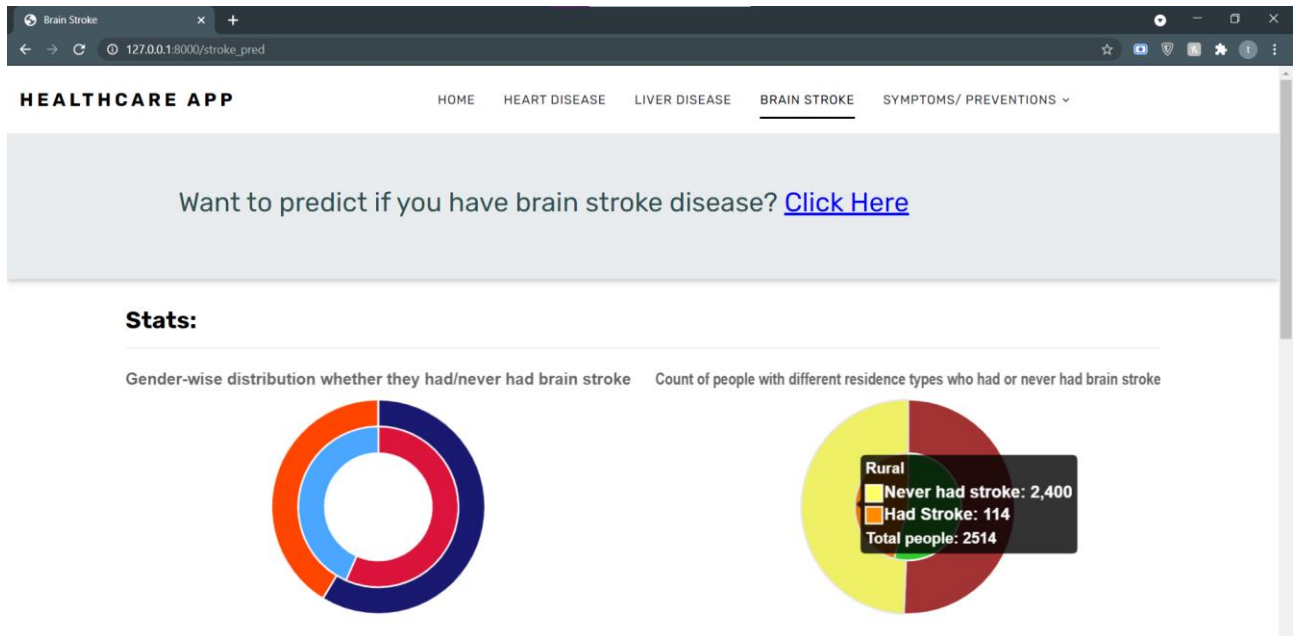


Figure 9.a: Brain Stroke page

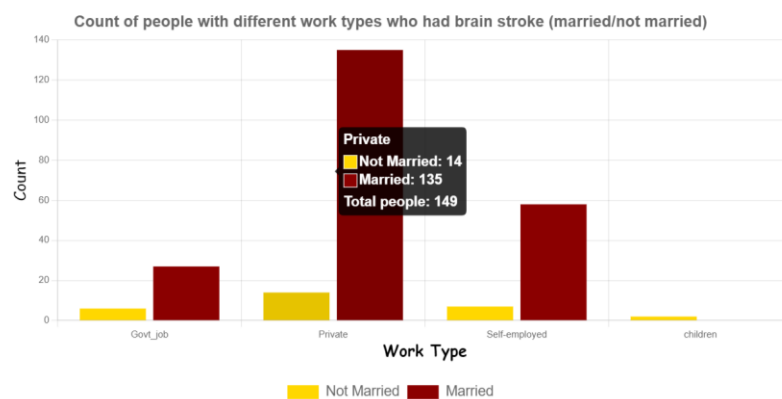


Figure 9.b: Bar graph for work type

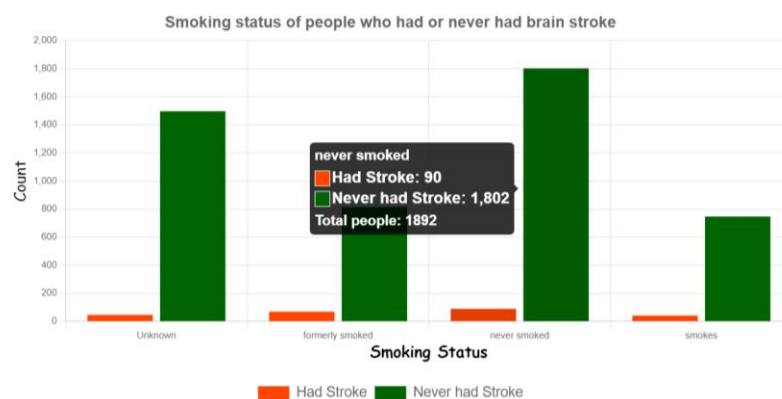


Figure 9.c: Bar graph for smoking status

The screenshot shows a web browser window with the URL `127.0.0.1:8000/stroke_pred`. The page is titled "HEALTHCARE APP" and has a navigation bar with links to HOME, HEART DISEASE, LIVER DISEASE, BRAIN STROKE (active), and SYMPTOMS/ PREVENTIONS. A banner at the top asks "Want to predict if you have brain stroke disease?" with a "Click Here" link. Below this is a "Stats:" section with two links: "Gender-wise distribution whether they had/never had brain stroke" and "Count of people with different residence types who had or never had brain stroke". The main form is titled "Brain Stroke Prediction" and contains the following fields:

Gender:	<input type="text" value="Female"/>	Have Heart Disease?	<input type="text" value="No"/>	Residence Type:	<input type="text" value="Urban"/>
Age:	<input type="text" value="22"/>	Ever Married?	<input type="text" value="No"/>	Average Glucose Level:	<input type="text" value="105.22"/>
Have Hypertension?	<input type="text" value="No"/>	Work Type:	<input type="text" value="Private"/>	BMI:	<input type="text" value="31.2"/>
				Smoking Status:	<input type="text" value="Never Smoked"/>

At the bottom of the form is a red button labeled "GET PREDICTIONS".

Figure 9.d: Brain Stroke Prediction Modal

The screenshot shows the same web browser window with the URL `127.0.0.1:8000/brain_stroke_result?csrfmiddlewaretoken=9651KXitZiZkwoGjMmq8AUyCuvnttVpirMuklRqSagrFOvtnUDyyvBGVU7Go0wc&gender=Female&age=22&hypertension=No&...`. The page is titled "HEALTHCARE APP" and has the same navigation bar. A banner at the top asks "Want to predict if you have brain stroke disease?" with a "Click Here" link. Below this is a green box titled "Predictions" with the following text:

**Predictions**

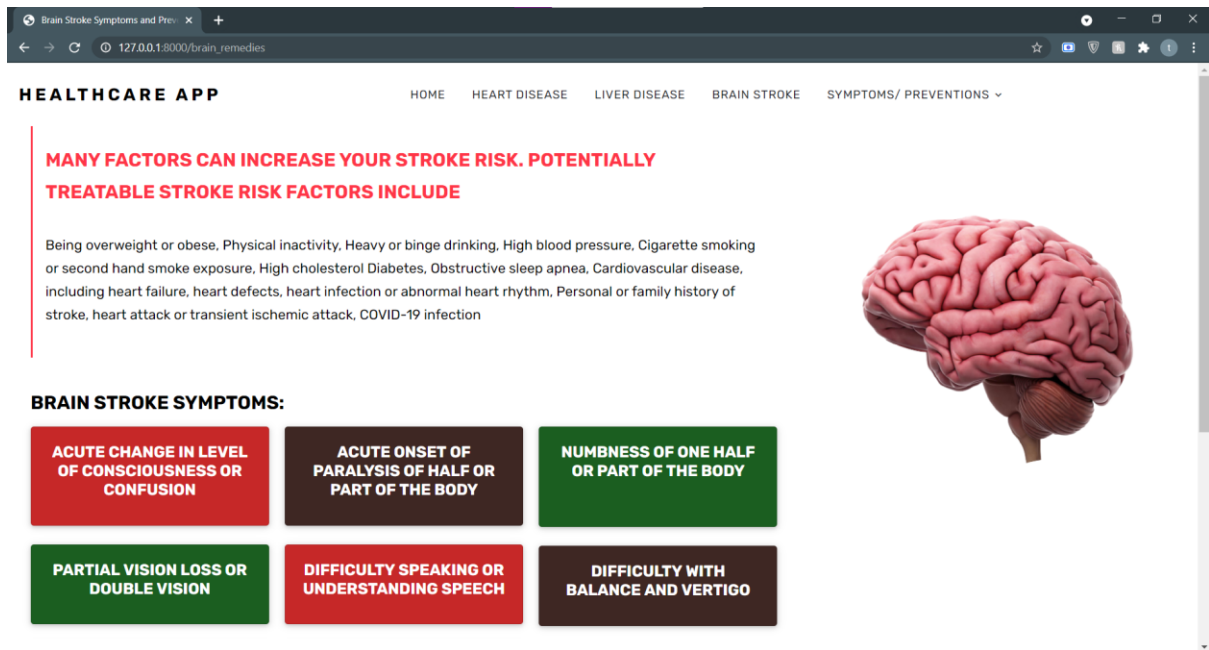
You don't have chances of getting brain stroke

[View Symptoms and Preventions](#)

**\*\* Note : Accuracy of predictions: 96.9 %**

Figure 9.e: Predictions result

## SYMPTOMS/ PREVENTIVE MEASURES:



**HEALTHCARE APP**      HOME   HEART DISEASE   LIVER DISEASE   BRAIN STROKE   SYMPTOMS/ PREVENTIONS ▾

**MANY FACTORS CAN INCREASE YOUR STROKE RISK. POTENTIALLY TREATABLE STROKE RISK FACTORS INCLUDE**

Being overweight or obese, Physical inactivity, Heavy or binge drinking, High blood pressure, Cigarette smoking or second hand smoke exposure, High cholesterol Diabetes, Obstructive sleep apnea, Cardiovascular disease, including heart failure, heart defects, heart infection or abnormal heart rhythm, Personal or family history of stroke, heart attack or transient ischemic attack, COVID-19 infection

**BRAIN STROKE SYMPTOMS:**

- ACUTE CHANGE IN LEVEL OF CONSCIOUSNESS OR CONFUSION
- ACUTE ONSET OF PARALYSIS OF HALF OR PART OF THE BODY
- NUMBNESS OF ONE HALF OR PART OF THE BODY
- PARTIAL VISION LOSS OR DOUBLE VISION
- DIFFICULTY SPEAKING OR UNDERSTANDING SPEECH
- DIFFICULTY WITH BALANCE AND VERTIGO




Figure 10.a: Brain Stroke Symptoms

**HOW TO PREVENT BRAIN STROKE?**

- MANAGING DIABETES**  
Diet, exercise and losing weight can help to keep the blood sugar in a healthy range.
- QUITTING TOBACCO**  
Smoking raises the risk of stroke for smokers and non-smokers exposed to passive smoke.
- MAINTAINING A HEALTHY WEIGHT**  
Being overweight contributes to other stroke risk factors, such as high blood pressure, cardiovascular disease and diabetes.
- LOWERING THE AMOUNT OF CHOLESTEROL AND SATURATED FAT IN THE DIET**  
Eating less cholesterol and fat, especially saturated fat and trans fats, may reduce the buildup in arteries.
- CONTROLLING HIGH BLOOD PRESSURE (HYPERTENSION)**  
This is one of the most important things you can do to reduce your stroke risk. If you've had a stroke, lowering your blood pressure can help prevent a stroke. Healthy lifestyle changes and medications are often used to treat high blood pressure.
- EATING A DIET RICH IN FRUITS AND VEGETABLES**  
A diet containing five or more daily servings of fruits or vegetables may reduce your risk of stroke. The Mediterranean diet, which emphasizes olive oil, fruit, nuts, vegetables and whole grains, may be helpful.

Figure 10.b: Brain Stroke preventive measures

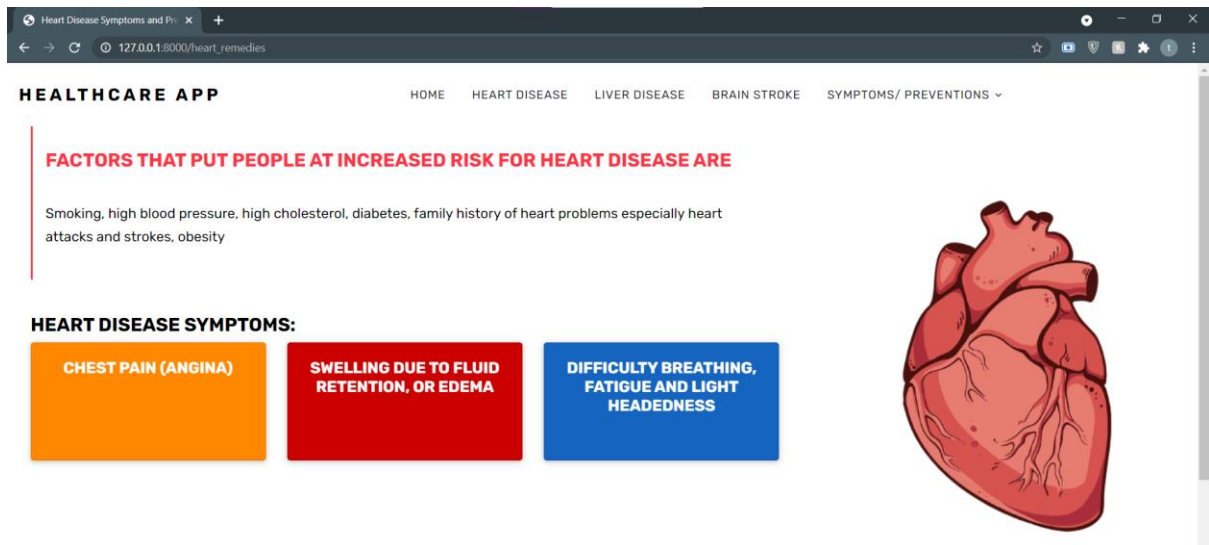


Figure 11.a: Heart Disease symptoms

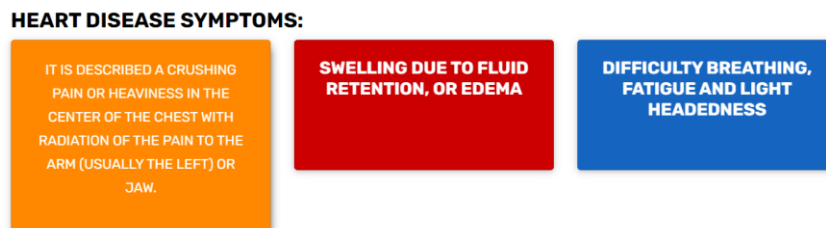


Figure 11.b: On Hover flip effect of symptom



Figure 11.c: Heart Disease preventive measures



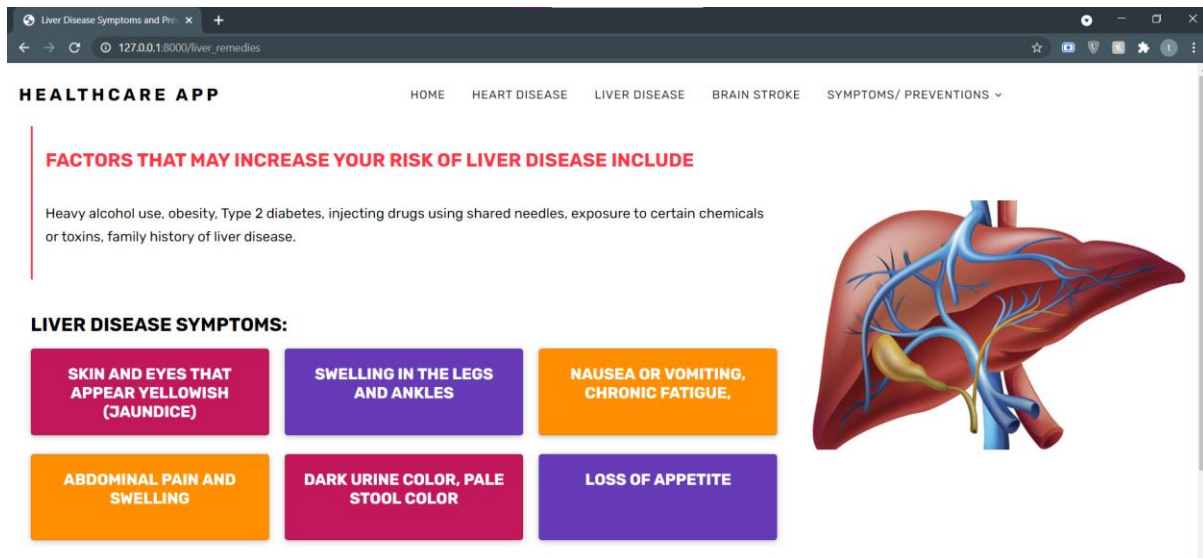


Figure 12.a: Liver Disease Symptoms



Figure 12.b: Liver Disease preventive measures

## 8.4 WORK DONE ON PROJECT

1. Search and download of datasets.
2. Data preprocessing.
3. Exploratory Data Analysis.
4. Selecting model based on score
5. Making user interface for the website
6. Integrating model into website
7. Adding charts using chart.js
8. Add Symptoms/ Preventions