

## Sprint 3 -Prediction:

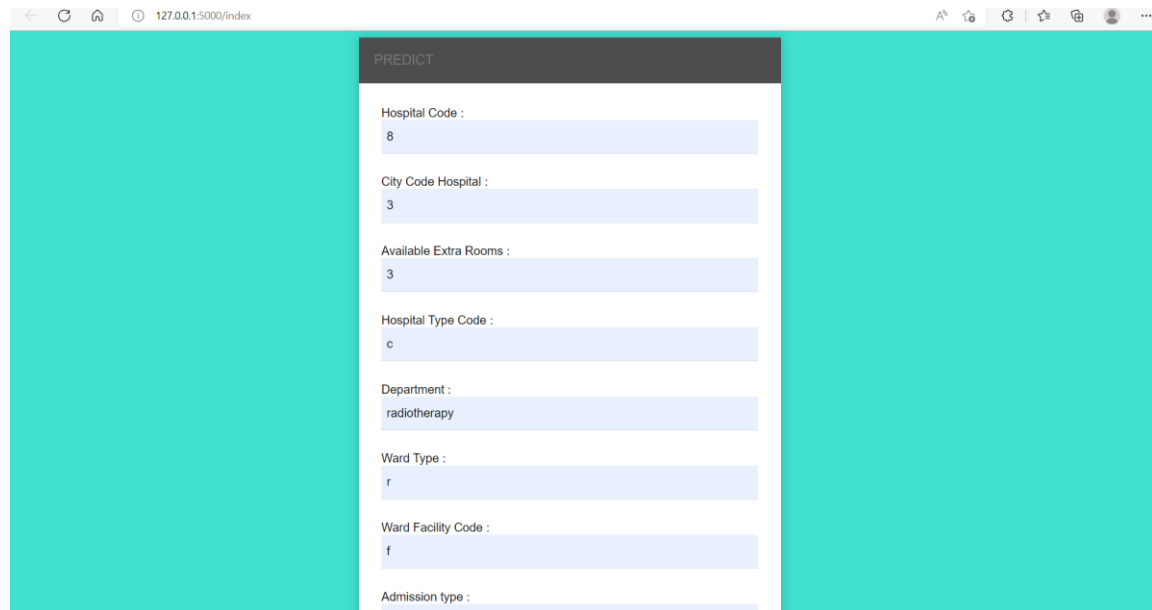
CODE:

```
temp=[]
columns=['Hospital_code','City_Code_Hospital','Available Extra Rooms in
Hospital','Hospital_type_code','Department','Ward_Type','Ward_Facility_Code','
Type of Admission','Severity of Illness','Age']
hospitaltypecode_dict={'a':0,'b':1,'c':2,'d':3,'e':4,'f':5,'g':6}
department_dict={"TB & Chest
disease":0,"anesthesia":1,"gynecology":2,"radiotherapy":3,"surgery":4}
wardtype_dict={'p':0,'q':1,'r':2,'s':3,'t':4,'u':5}
wardfacilitycode_dict={'a':0,'b':1,'c':2,'d':3,'e':4,'f':5}
admissiontype_dict={"emergency":0,"trauma":1,"urgent":2}
severityofillness_dict={"extreme":0,"minor":1,"moderate":2}
age_dict={"0-10":0,"11-20":9,"21-30":1,"31-40":2,"41-50":3,"51-60":4,"61-
70":5,"71-80":6,"81-90":7,"91-100":8}
temp.append(int(request.form['hospitalcode']))
temp.append(int(request.form['citycodehospital']))
temp.append(int(request.form['extrarooms']))
temp.append(hospitaltypecode_dict[request.form['hospitaltypecode']])
temp.append(department_dict[request.form['department']])
temp.append(wardtype_dict[request.form['wardtype']])
temp.append(wardfacilitycode_dict[request.form['wardfacilitycode']])
temp.append(admissiontype_dict[request.form['admissiontype']])
temp.append(severityofillness_dict[request.form['severityofillness']])
temp.append(age_dict[request.form['age']])
print(temp)
df=pd.DataFrame(columns=columns)
df=pd.concat((df,pd.DataFrame(data=[temp],columns=columns)))
data=pd.read_csv("D:/LANAARD 7/ACADEMICS/SEM 7/NAALAYA
THIRAN/Dataset/train/train.csv")

arr=['Hospital_type_code','Hospital_region_code','Department','Ward_Type','Ward
d_Facility_Code','Type of Admission','Severity of Illness','Age','Stay']
le = LabelEncoder()
for ele in arr:
    label = le.fit_transform(data[ele])
    data.drop(ele, axis=1, inplace=True)
    data[ele]=label
data.drop('Bed Grade',axis=1,inplace=True)
data.drop('City_Code_Patient',axis=1,inplace=True)
features=['Hospital_code','City_Code_Hospital','Available Extra Rooms in
Hospital','Hospital_type_code','Department','Ward_Type','Ward_Facility_Code','
Type of Admission','Severity of Illness','Age','Stay']
X_train, X_test, y_train, y_test = train_test_split(data[features[:-1]],
data['Stay'], test_size=0.1, random_state=42)
dtree = DecisionTreeClassifier()
dtree = dtree.fit(X_train, y_train)
result=dtree.predict(df)
print("result : ",result)
```

```
result_dict={0:"0-10 days",1:"10-20 days",2:"20-30 days",3:"30-40 days",4:"40-50 days",5:"50-60 days",6:"60-70 days",7:"70-80 days",8:"80-90 days",9:"90-100 days",10:"more than 100 days"}
result=result_dict[result[0]]
return render_template("index.html",result=result)
```

OUTPUT :



The screenshot shows a web browser window with the address bar displaying "127.0.0.1:5000/index". The main content area features a form titled "PREDICT" with a dark header. The form contains several input fields, each with a label and a text input area. The labels and their corresponding values are: "Hospital Code :" with value "8", "City Code Hospital :" with value "3", "Available Extra Rooms :" with value "3", "Hospital Type Code :" with value "c", "Department :" with value "radiotherapy", "Ward Type :" with value "r", "Ward Facility Code :" with value "f", and "Admission type :". The form is set against a light blue background.

This shows the form that is created in the web page to get information about the patient which is then analysed by the decision tree model to predict the length of stay of the patient.