Fourth Progress Report

of

Project - I

Subject Code: 4IT31

Academic Year 2021-22

Group Number : G - 13

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Topic : **House Price Prediction**

Guide Name : **Prof. Prachi Shah**

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Table of Content

1 – Previous Work Done :

- Sign-Up / Login
- Data Cleaning & Pre-Processing
- UI Design

- Prediction Page
- Data Cleaning & Pre-Processing
- Handling Categorical Column
- Selecting Model
- UI Design

2 – Further Work Done on Modules :

❖ Training Model:

```
X_train, X_test, Y_train, Y_test = train_test_split(X, Y, test_size=0.2, random_state=292)

final_LR_model = LinearRegression()

pipe = make_pipeline(column_trans, final_LR_model)

pipe.fit(X_train, Y_train)

Y_pred = pipe.predict(X_test)

df_output = pd.DataFrame({

   "actual" : Y_test.tolist(),

   "pred" : Y_pred.tolist()

})


df_output
```

	actual	pred
0	83.00	71.203751
1	67.77	55.008371
2	165.00	154.841416
3	72.00	78.151181
4	77.00	68.790436
...	...	...
2013	40.50	56.515097
2014	45.84	63.354683
2015	74.52	63.943111
2016	84.00	93.102263
2017	67.00	66.223681

2018 rows × 2 columns

❖ Dumping Model:

```
import pickle

pickle.dump(pipe, open('BangloreHousePricePredictioModel.pkl', 'wb'))
```

```
pipe.predict(pd.DataFrame([['1st Phase JP Nagar', '2', '1000', '2']], columns=['location', 'size_BHK', 'total_sqft', 'bathroom']))
```

```
array([89.49179532])
```

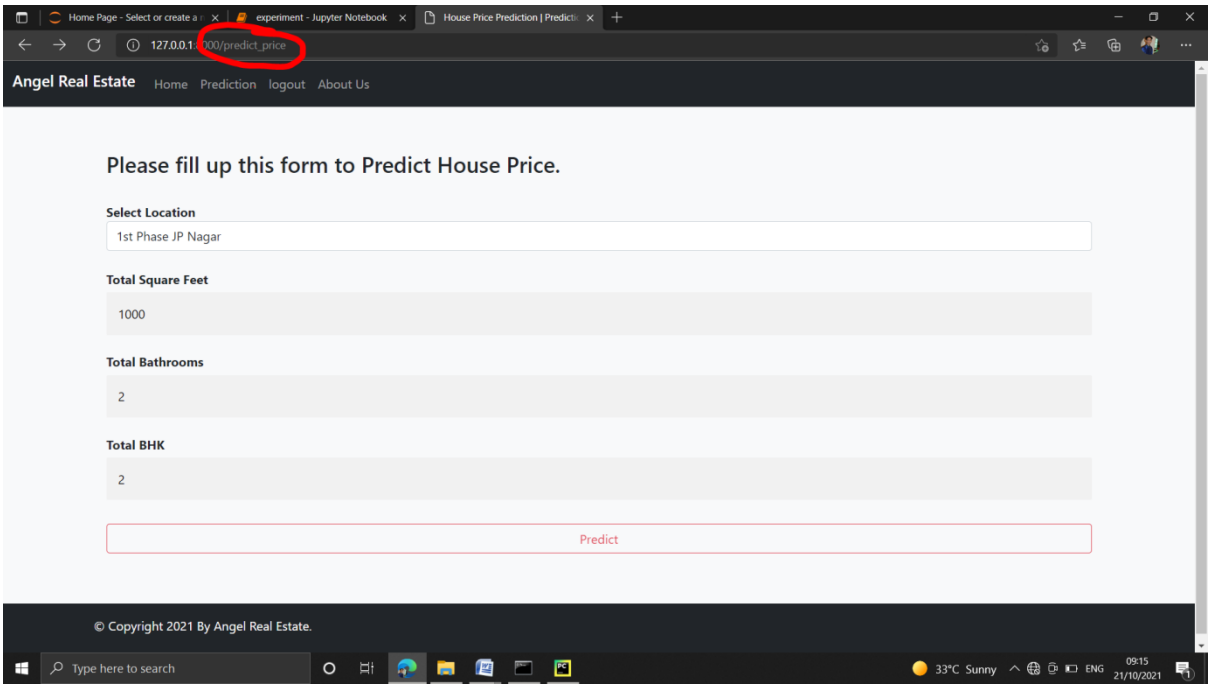
```
pipe.predict(pd.DataFrame([['Indira Nagar', '2', '1000', '2']], columns=['location', 'size_BHK', 'total_sqft', 'bathroom']))
```

```
array([136.78987714])
```

❖ Backend:

- **Description:** In this module we had connected our trained model with this Django website.

```
from django.shortcuts import render

import pandas as pd

import pickle


def predict_price_actual(request):
    model = pickle.load(open('BangloreHousePricePredictioModel.pkl', 'rb'))
    location = request.GET['location']
    sqft = request.GET['sqft']
    bath = request.GET['bath']
    bhk = request.GET['bhk']


    print(location, "\n")
    print(sqft, "\n")
    print(bath, "\n")
    print(bhk, "\n")


    prediction = model.predict(pd.DataFrame([[location, bhk, sqft, bath]], columns=["location", "size_BHK", "total_sqft", "bathroom"]))
    print(prediction, "rupees")


    return render(request, "result.html", {'ans': prediction[0]})
```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Please fill up this form to Predict House Price.
Select Location
1st Phase JP Nagar
Total Square Feet
1000
Total Bathrooms
2
Total BHK
2
Predict
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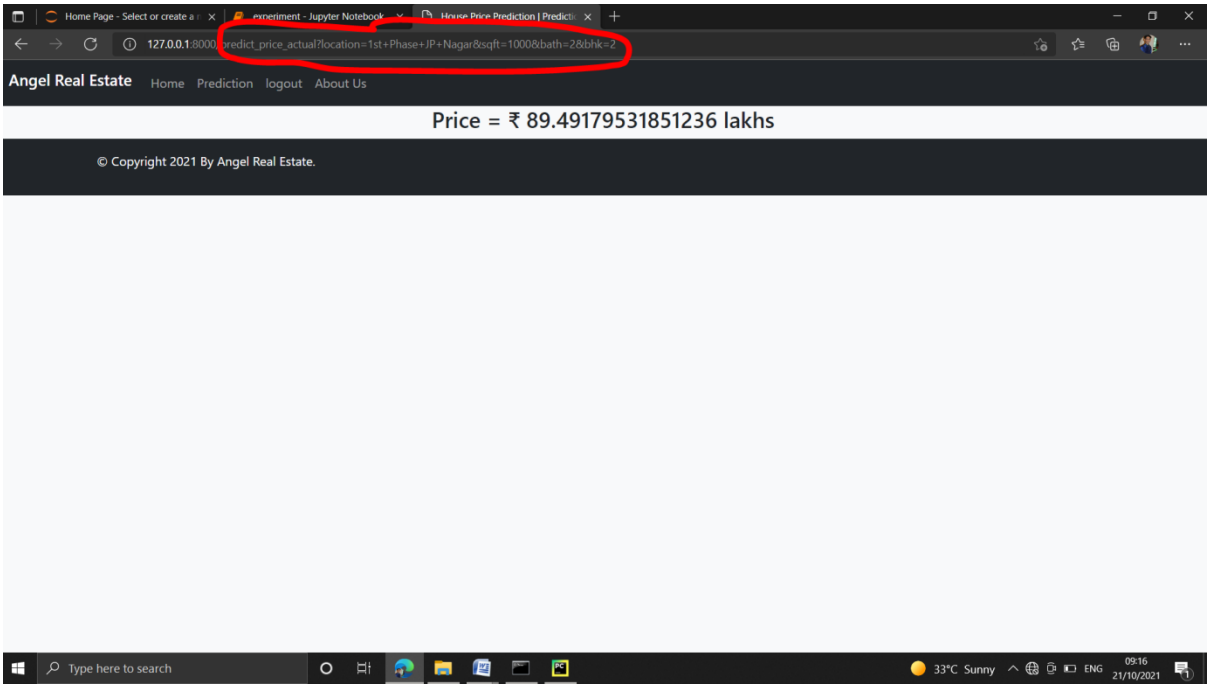
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3 – Ending Note:

Here we conclude our project-I. We had completed all our work remaining from last report. Please give your valuable suggestions so we can now work on it and can complete it in permit able time.

4 - Conclusion:

As part of second mid presentation we have completed our SRS and other three progress report and also, we are done with around 80% - 90% work on actual system implementation. If some changes are required then we will take that into consideration and do changes in completed work.

*****The End*****