```
 1 import streamlit as st
 2 import pickle
 3 import pandas as pd
 4 import numpy as np
 5
 6 def load_model():
 7    with open('trained_model.pkl', 'rb') as file:
 8     model = pickle.load(file)
 9     return model
10
11 model = load_model()
12
13 RF_loaded = model["model"]
14
15
16 with open('scaler.pkl', 'rb') as f:
17     scaler=pickle.load(f)
18
19 def show_prediction():
20     with st.form(key='my_form'):
21         st.title("Phoenix home price calculator")
22         st.write("""### Enter the following criteria
   to calculate predicted price""")
23         ZIPCODE = ('85001','85002','85003','85004','
   85005','85006','85007','85008','85009','85010','85011
   ','85012','85013','85014','85015','85016','85017','
   85018','85019','85020','85021','85022','85023','85024
   ','85026','85027','85028','85029','85030','85031','
   85032','85033','85034','85035','85036','85037','85038
   ','85039','85040','85041','85042','85043','85044','
   85045','85046','85048','85050','85051','85053','85054
   ','85060','85061','85062','85063','85064','85065','
   85066','85067','85068','85069','85070','85071','85072
   ','85073','85074','85075','85076','85078','85079','
   85080','85082','85083','85085','85086','85087')
24         BEDS = (1,2,3,4,5)
25         BATHS = (1, 1.5,2,2.5,3,3.5,4)
26         POOL = ('Y','N')
27         HOA = ('Y','N')
28
29
```

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30
31          ZIPCODE = st.selectbox("Select the ZipCode",
   ZIPCODE)
32          BEDS = st.selectbox("Select the Number of
   Bedrooms", BEDS)
33          BATHS = st.selectbox("Select the Number of
   Bathrooms",BATHS)
34          SQFT = st.number_input ("Enter the Square
   Footage of House", min_value=500, max_value=3500,
   value=1500)
35          LOTSIZE = st.number_input("Select Lot Size",
   min_value=3500,max_value=15000, value=7000)
36          YEARBUILT = st.number_input("Enter the year
   the house was built", min_value = 1915, max_value=
   2023, value = 2015)
37          POOL = st.checkbox("Pool", help("Check the
   box if the house has a pool"))
38          HOA = st.checkbox("HOA", help("Check the box
   if the house is in an HOA"))
39          RATE = st.number_input("Enter the expected 30
    Yr Mortgage Rate", min_value = 2.5, max_value=10.0,
   value = 6.5)
40
41          submit_button = st.form_submit_button(label
    = 'Calculate Predicted Price')
42
43      if submit_button:
44          X = scaler.transform([[ZIPCODE,BEDS,BATHS,
   SQFT,LOTSIZE,YEARBUILT,POOL,HOA,RATE]])
45
46
47          prediction = RF_loaded.predict(X)
48          df = pd.DataFrame(prediction)
49
50          a = df[0].iat[0]
51          b = f"${a:,.0f}"
52
53          st.write('<p style = " font-size:18px; color
   : black;"> The MAE or average absolute error between
   the predicted values and the actual values is $15,932
   . \n The predicted value for the house is: ',b,'.</p
```

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53 >', unsafe_allow_html = True)
54
55
56
57
58
59
```