School: .... Campus: ....

Academic Year: .... Subject Name: .... Subject Code: ....

Semester: .... Program: .... Branch: .... Specialization: ....

Date: ....

Applied and Action Learning
(Learning by Doing and Discovery)

Name of the Experiement :

* Coding Phase: Pseudo Code / Flow Chart / Algorithm

```
import numpy as np
import pandas as pd
from sklearn.datasets import fetch_california_housing
from sklearn.model_selection import train_test_split
from sklearn.linear_model import LinearRegression
from sklearn.metrics import mean_squared_error, r2_score


california = fetch_california_housing()
X = pd.DataFrame(california.data, columns=california.feature_names)
y = pd.Series(california.target, name="PRICE")

X_train, X_test, y_train, y_test = train_test_split(X, y, test_size=0.2, random_state=42)

model = LinearRegression()
model.fit(X_train, y_train)

y_pred = model.predict(X_test)

print("Mean Squared Error: ", mean_squared_error(y_test, y_pred))
print("R² Score: ", r2_score(y_test, y_pred))

print("\nPredicted Prices (first 5): ", y_pred[:5])
print("Actual Prices (first 5): ", y_test.values[:5])
```

* Implementation Phase: Final Output (no error)

```
Mean Squared Error:  0.555891598695244
R² Score:  0.5757877060324511

Predicted Prices (first 5):  [0.71912284
1.76401657 2.70965883 2.83892593 2.60465725]
Actual Prices (first 5):  [0.477   0.458   5.00001
2.186   2.78   ]
```

ASSESSMENT

Rubrics	Full Mark	Marks Obtained	Remarks
Concept	10		
Planning and Execution/ Practical Simulation/ Programming	10		
Result and Interpretation	10		
Record of Applied and Action Learning	10		
Viva	10		
Total	**50**		

Signature of the Student:

Name :

Signature of the Faculty:

Regn. No. :

As applicable according to the experiment. Two sheets per experiment (10-20) to be used.