1. **Application of Gaussian Naive Bayes**

   In this part you may change the packages/modules as you wish. The structure listed below is just to give you an idea of what is expected.

```python
import numpy as np
import pandas as pd
import seaborn as sns
import matplotlib.pyplot as plt
from sklearn import datasets
from sklearn.model_selection import train_test_split
from sklearn.metrics import accuracy_score
from sklearn.datasets import load_breast_cancer
from naive_bayes import GaussianNB

# Load breast cancer data using load_breast_cancer and inspect it.
cancer =

# Get the data and target
X, y =

# Get feature names
feature_names =
print(feature_names)

# Create a pandas dataframe
df_cancer =

# Compute pairwise correlation of features.
# See https://pandas.pydata.org/docs/reference/api/pandas.DataFrame.corr.html
corr =

# Plot correlations using seaborn or any other plotting tool.



# Can you use all of the features? Remember the fundamental assumption of
# naive bayes. Explain your thinking.



# There are many features. Select some of them (maybe four or five) and get
# predictions for your test samples using GaussianNB class that you have
# implemented in the previous homework.


# Your selected features
X =
# Labels of your selected features
y =

# Split the data using train_test_split
X_train, X_test, y_train, y_test =


clf = GaussianNB()
clf.fit(X_train, y_train)
predictions = clf.predict(X_test)
print("Accuracy score:", accuracy_score(y_test, predictions))
```