

สัมมนาเสริม (กิจกรรมเดี่ยว)

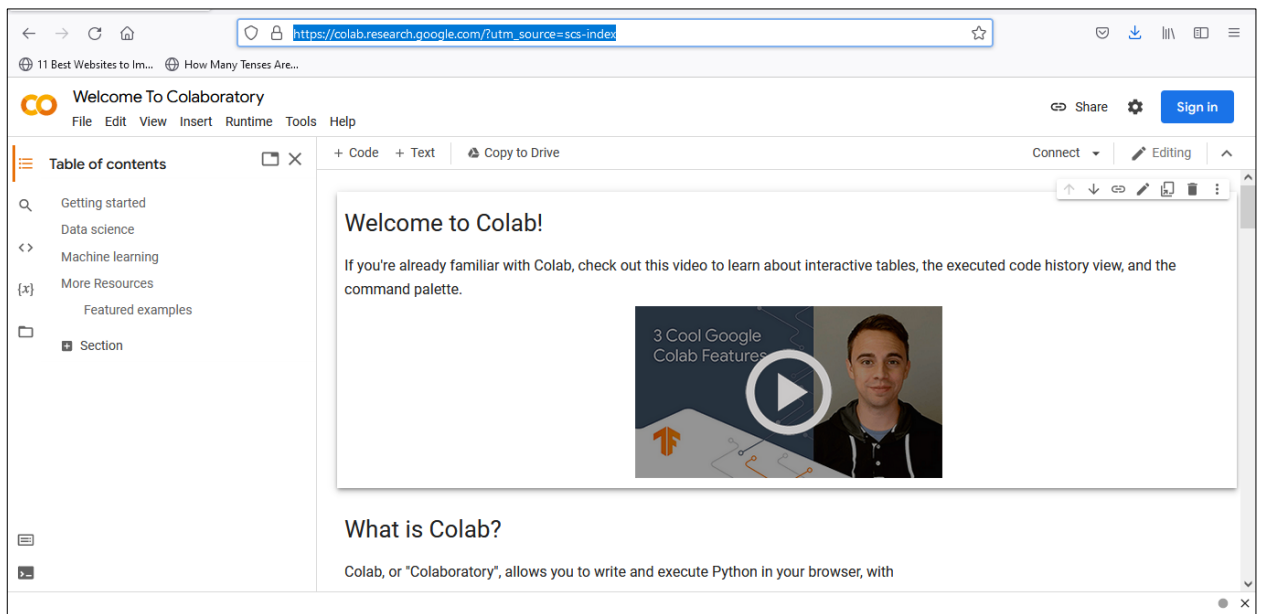
ชุดวิชา 99711 วิทยาการข้อมูลและข้อมูลขนาดใหญ่

9-10 พฤศจิกายน 2567

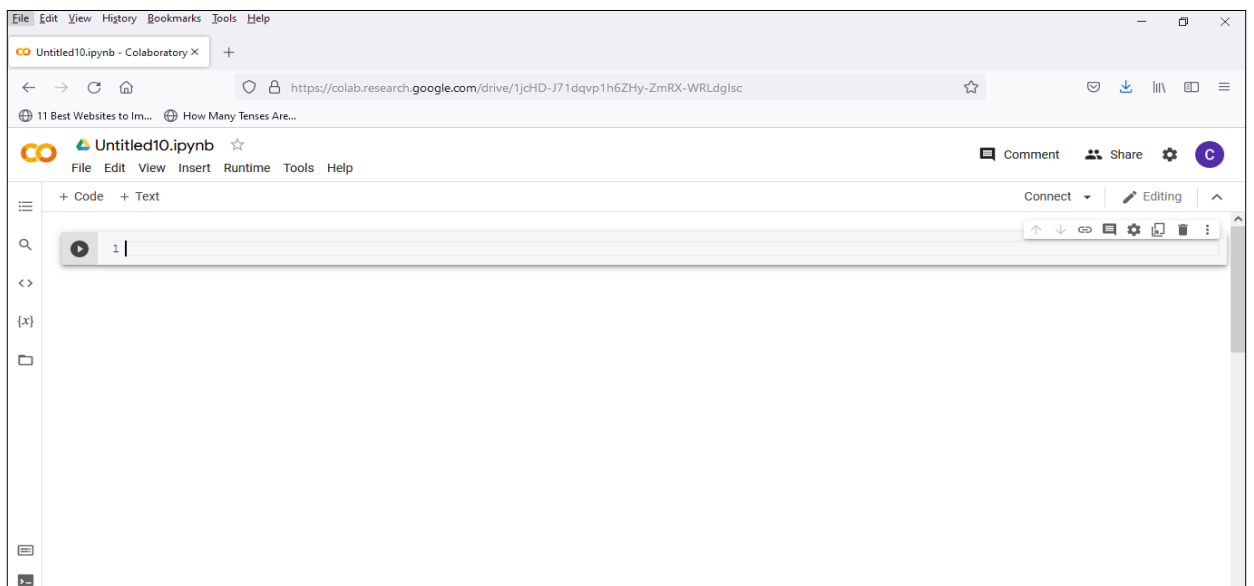
1 Welcome to colaboratory-Google Research

1.1 https://colab.research.google.com/?utm_source=scs-index

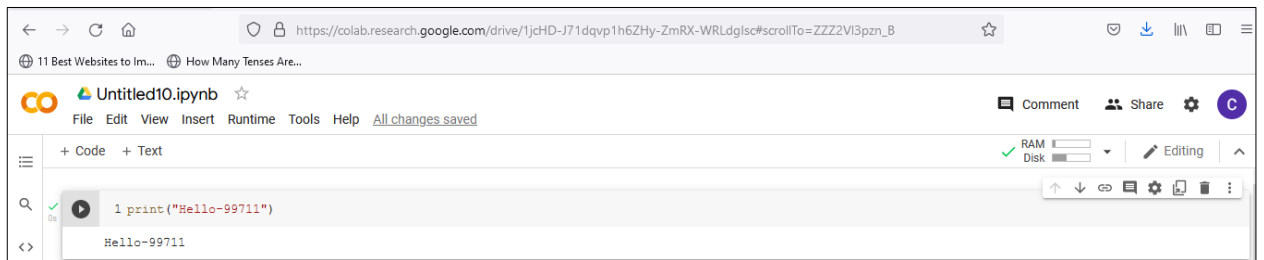
1.2 Sign in : google account (gmail)



1.3 Click at: New notebook



1.4 At line 1 then type: `print("Hello-99711")` and press a run cell button or shift+Enter button (for run the program)



2 A predictive Analytics Model for Students Grade

2.1 Import libraries

```
import numpy as np
import pandas as pd
import matplotlib.pyplot as plt
import sklearn #ติดตั้ง sklearn ด้วยคำสั่ง pip install scikit-learn
from sklearn.linear_model import LinearRegression
from sklearn.metrics import mean_squared_error, r2_score
```

2.2 Read file

```
dataset = pd.read_csv('gradingsystem_training')
dataset.head()
```

2.3 Display 2 variables with graph

```
plt.scatter(x,y,color='red')
plt.xlabel('MATH', fontsize=14)
plt.ylabel('CGPA', fontsize=14)
plt.show()
```

2.4 Set x and y variable for generating a model

```
x = dataset.iloc[:, 2].values.reshape(-1, 1) #อาร์เรย์ตัวแปรอิสระ
y = dataset.iloc[:, 3].values.reshape(-1, 1) #อาร์เรย์ตัวแปรตาม
```

2.5 Splitting data for machine learning model (70:30)

```
from sklearn.model_selection import train_test_split
x_train, x_test, y_train, y_test = train_test_split(x,y,train_size= 0. 7,
test_size=0.3,random_state=0)
```

2.6 Building a Linear Regression Model

```
regression_model = LinearRegression()  
regression_model.fit(x_train,y_train)
```

2.7 Prediction

```
y_predicted = regression_model.predict(x_test)  
y_predicted  
  
y_test  
df = pd.DataFrame({'Actual': [y_test], 'Predicted': [y_predicted]})  
print(df)
```

2.8 Model Evaluation

```
rmse = mean_squared_error(y_test, y_predicted)  
r2_score = r2_score(y_test,y_predicted)
```

2.9 Q1: If he/she get a math score = 30 then What a CGPA of this student?

Answer:.....