Simple Linear Regression

```
import pandas as pd
import numpy as np
import seaborn as sns
```

```
df = pd.read_excel('ENB2012_data.xlsx')
```

```
#rename columns
column_names = {'X1':'Relative_Compactness', 'X2': 'Surface_Area',
'X3': 'Wall_Area', 'X4': 'Roof_Area', 'X5': 'Overall_Height',
'X6': 'Orientation', 'X7': 'Glazing_Area',
'X8': 'Glazing_Area_Distribution',
'Y1': 'Heating_Load', 'Y2': 'Cooling_Load'}
```

```
df = df.rename(columns=column_names)
#select a sample of the dataset
simple_linear_reg_df = df[['Relative_Compactness', 'Cooling_Load']].sample(15, random_state=2)
```

```
#regression plot
sns.regplot(x="Relative_Compactness", y="Cooling_Load",
data=simple_linear_reg_df)
```

```
<matplotlib.axes._subplots.AxesSubplot at 0x7f9f257d2dd0>
```