uas-g-211-21-0122-1

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- **Teknik Informatika B3**

0.1 UAS Komputer Grafis

```
[2]: #inport modules
     import numpy as np
     import matplotlib.pyplot as plt
     import pandas as pd
     from matplotlib import pyplot as plt
     import seaborn as sns
     import matplotlib.dates as mdates
```

```
[4]: # Dataset
     dataset = {
         'Bulan': ['Januari', 'Februari', 'Maret', 'April', 'Mei', 'Juni', 'Juli',␣
      ↪'Agustus', 'September', 'Oktober', 'November', 'Desember'],
         '1981-1990': [99, 117, 126, 102, 98, 100, 129, 119, 118, 128, 147, 168],
         '1991-2000': [187, 150, 113, 107, 199, 145, 146, 178, 154, 184, 176, 196],
         '2001-2010': [178, 139, 193, 162, 162, 182, 196, 213, 168, 222, 232, 225]
     }

     # Convert Bulan to a number.
     angka_bulan = [str(i + 1) for i in range(len(dataset['Bulan']))]

     # Creating separate bar chart visualizations
     plt.figure(figsize=(16, 8))

     x = np.arange(len(dataset['Bulan']))
     width = 0.2
     colors = ['red', 'green', 'yellow']

     for i, stasiun in enumerate(dataset.keys()):
         if stasiun != 'Bulan':
             plt.bar(x + (i * width), dataset[stasiun], width=width, label=stasiun,␣
      ↪color=colors[i % len(colors)])
```
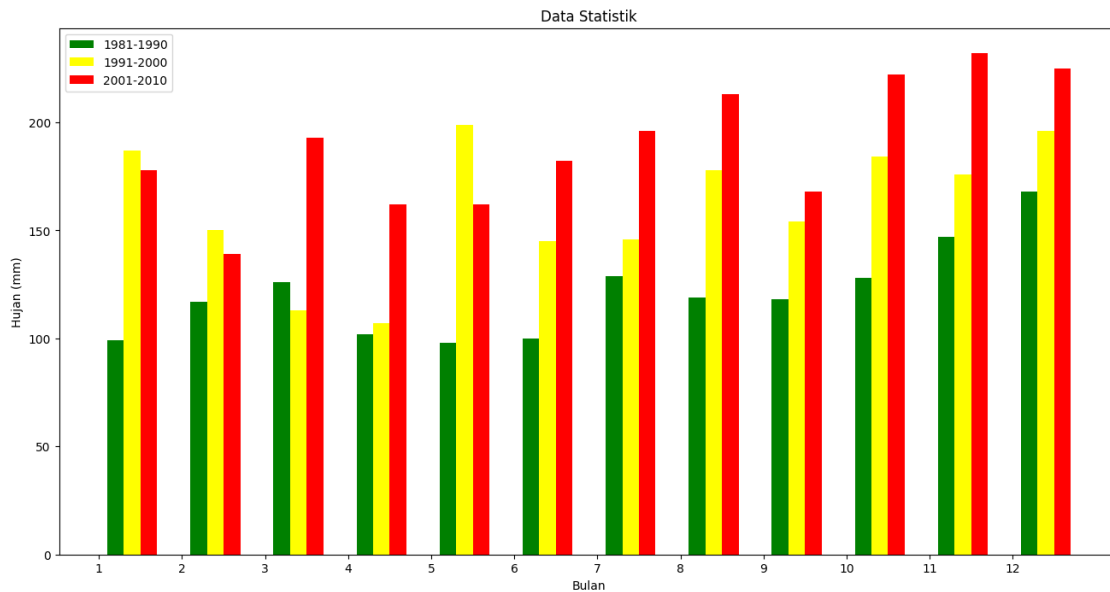
```
plt.xlabel('Bulan')
plt.ylabel('Hujan (mm)')
plt.title('Data Statistik')

#Use month as the label"
plt.xticks(x, angka_bulan)
plt.legend()
plt.show()
```


[5]:
```python
# Dataset
data = {
    'jam (UTC)': ['00.00', '01.30', '03.00', '04.30', '06.00', '07.30', '09.
 ↪00', '10.30'],
    'asimilasi': [17, 18, 19, 20, 19, 21, 23, 22],
    'observasi': [18, 17, 18, 19, 20, 21, 21, 23],
    'non Asimilasi': [17, 18, 17, 20, 21, 23, 23, 22]
}

df = pd.DataFrame(data)

# Melt the dataframe to transform its data structure.
df_melt = pd.melt(df, id_vars='jam (UTC)', var_name='Kategori',␣
 ↪value_name='Jumlah')

#Displaying a graph using Seaborn
plt.figure(figsize=(10, 4))
```

```python
sns.lineplot(data=df_melt, x='jam (UTC)', y='Jumlah', hue='Kategori',
 ↪palette={'asimilasi': 'pink', 'observasi': 'brown', 'non Asimilasi': ''},
 ↪linewidth=3, markers=True, marker='o')

plt.xlabel('Jam (UTC)')
plt.ylabel('Celcius')
plt.title('Suhu Permukaan')

plt.legend()
plt.show()
```