Pristian Budi Dharmawan_2501983105_LA20 – BB20_Computational Biology_Session 1_Basic Sequence Plotting

Exercise Session 1

Task:

1. Create basic sequence that contain with minimum 50 Character of ATCG
2. Sequence:
   a. ATGCATGGTGCGCGAATGATCGCGATGGTCACACATCGCGCATGCATCATGATGACG

Answer:

```python
# 1
# After installing BioPhyton we can import the package
import Bio
import matplotlib.pyplot as plt
dir(Bio)
from Bio.Seq import Seq
from collections import Counter
```

```python
# 2
seq_ex = Seq('ATGCATGGTGCGCGAATGATCGCGATGGTCACACATCGCGCATGCATCATGATGACG')
len(seq_ex)
```

```python
# 3
freq_ex = Counter(seq_ex)
freq_ex
```

```python
# 4
plt.bar(freq_ex.keys(),freq_ex.values())
```

Result:

```
# 1
# After installing BioPhyton we can import the package
import Bio
import matplotlib.pyplot as plt
dir(Bio)
from Bio.Seq import Seq
from collections import Counter
```
[5] ✓ 0.5s

```
# 2
seq_ex = Seq('ATGCATGGTGCGCGAATGATCGCGATGGTCACACATCGCGCATGCATCATGATGACG')
len(seq_ex)
```
[22] ✓ 0.0s

... 57

```
# 3
freq_ex = Counter(seq_ex)
freq_ex
```
[20] ✓ 0.0s

... Counter({'A': 14, 'T': 12, 'G': 17, 'C': 14})

```
# 4
plt.bar(freq_ex.keys(),freq_ex.values())
```
[21] ✓ 0.2s

... <BarContainer object of 4 artists>