Contents

5. PANDAS – SERIES – METHODS

1. Series Methods

- ✓ Series is a predefined class.
- ✓ Series class having different methods
- ✓ These methods perform operations on Series of values.

1.1. head()

- ✓ head() is predefined method in Series class.
- ✓ We can access head() method by using series object.
- ✓ This method returns first five values from the series

Program Name: Accessing first five values from series
demo1.py

```
import pandas as pd

marks = [56, 45, 35, 41, 60, 57, 56, 56]
s = pd.Series(marks)

print(s)
print(s.head())
```

Output

```
0    56
1    45
2    35
3    41
4    60
5    57
6    56
7    56
dtype: int64
0    56
1    45
2    35
3    41
4    60
dtype: int64
```

1.2. tail()

- ✓ tail() is predefined method in Series class.
- ✓ We can access tail() method by using series object.
- ✓ This method returns last five values from the series

Program Name: Accessing last five values from series
demo2.py

```
import pandas as pd

marks = [56, 45, 35, 41, 60, 57, 56, 56]
s = pd.Series(marks)

print(s)
print(s.tail())
```

Output

```
0    56
1    45
2    35
3    41
4    60
5    57
6    56
7    56
dtype: int64
3    41
4    60
5    57
6    56
7    56
dtype: int64
```

1.3. sum()

- ✓ sum() is predefined method in Series class.
- ✓ We can access sum() method by using series object.
- ✓ This method returns the sum of all values.

Program Name: Get the sum of series of values.
demo3.py

```
import pandas as pd

sales = [56, 45, 35, 41, 44, 60]
s = pd.Series(sales)

print(s)
print(s.sum())
```

Output

```
0    56
1    45
2    35
3    41
4    44
5    60
dtype: int64
281
```

Program Name: Get the sum of series of values.
demo4.py

```
import pandas as pd
import numpy as np

marks = [56, 45, 35, 41, np.nan, 60, np.nan]
s = pd.Series(marks)

print(s)
print(s.sum())
```

Output

```
0    56.0
1    45.0
2    35.0
3    41.0
4     NaN
5    60.0
6     NaN
dtype: float64
237.0
```

1.4. count()

- ✓ count() is predefined method in Series class.
- ✓ We can access count() method by using series object.
- ✓ This method returns the number of non-NAN/null values.

Program Name: Get the number of non-NaN values
demo5.py

```
import pandas as pd
import numpy as np

marks = [56, 45, 35, 41, np.nan, 60, np.nan]
s = pd.Series(marks)

print(s)
print(s.count())
```

Output

```
0    56.0
1    45.0
2    35.0
3    41.0
4     NaN
5    60.0
6     NaN
dtype: float64
5
```

1.5. mean()

- ✓ mean() is predefined method in Series class.
- ✓ We can access mean() method by using series object.
- ✓ This method returns the mean of series of values.

Program Name: Get the mean of series values
demo6.py

```
import pandas as pd

sales = [10, 20, 30, 40, 50]
s = pd.Series(sales)

print(s)
print(s.mean())
```

Output

```
0    10
1    20
2    30
3    40
4    50
dtype: int64
30.0
```

1.6. describe()

- ✓ describe() is predefined method in Series class.
- ✓ We can access describe() method by using series object.
- ✓ This method returns the below values,
  - count
  - mean
  - std
  - min
  - 25%
  - 50%
  - 75%
  - max

Program Name: describe() method
demo7.py

```
import pandas as pd

sales = [56, 45, 35, 41, 60]
s = pd.Series(sales)

print(s)
print(s.describe())
```

Output

```
0    56
1    45
2    35
3    41
4    60
dtype: int64
count     5.000000
mean     47.400000
std      10.406729
min      35.000000
25%      41.000000
50%      45.000000
75%      56.000000
max      60.000000
dtype: float64
```

1.7. unique()

- ✓ unique() is predefined method in Series class.
- ✓ We can access unique() method by using series object.
- ✓ This method returns unique values from the series.

Program Name: Get unique values from the series
demo8.py

```
import pandas as pd

marks = [56, 45, 35, 41, 60, 57, 56, 56]
s = pd.Series(marks)

print(s)
print(s.unique())
```

Output

```
0    56
1    45
2    35
3    41
4    60
5    57
6    56
7    56
dtype: int64
[56 45 35 41 60 57]
```

1.8. nunique()

- ✓ nunique() is predefined method in Series class.
- ✓ We can access nunique() method by using series object.
- ✓ This method returns number of unique values from the series.

Program Name: Get the number of unique values from the series
demo9.py

```
import pandas as pd

marks = [56, 45, 35, 41, 60, 57, 56, 56]
s = pd.Series(marks)

print(s)
print(s.nunique())
```

Output

```
0    56
1    45
2    35
3    41
4    60
5    57
6    56
7    56
dtype: int64
6
```