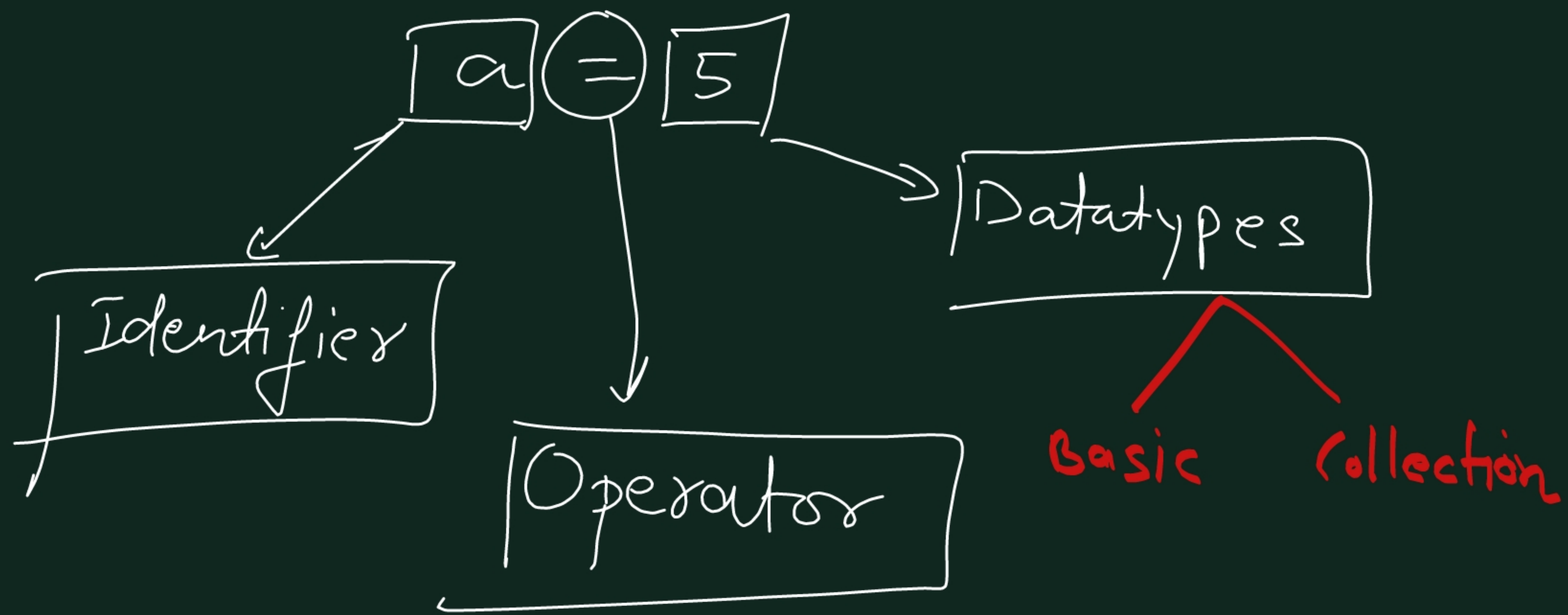


# Python Programming



# comprehension

[operation for i in collection]

# Functions

- a) lambda
- b) User defined
- c) Map()
- d) apply()



# EDA using Python

- ① Numpy
- ② Pandas
- ③ Matplotlib
- ④ Seaborn

Section: 1 → read & understand.

a) `pd.read_csv()`

b) `info()`, `describe()`, `head()`, `tail()`, `dtypes`, `columns`

Section: 2 - Data preprocessing

a) Fix rows, column + `drop()`, `rename()`, `astype()`, `to_datetime()`  
+ `df['New'] = logic using given column`

b) Fix duplicates + `duplicated()`  
`drop_duplicates()`



③ Fix missing values + `isnull()`, `fillna()`, `dropna()`  
+ imputation vs Interpolation

④ Fix Outliers + `filter/condition`, `replace()`

### Section 3 :- Visualization

① Matplotlib

<code>plt.figure()</code>	<code>plt.legend()</code>
<code>plt.chart()</code>	<code>plt.show()</code>
<code>plt.title()</code>	
<code>plt.xlabel()</code>	
<code>plt.ylabel()</code>	

### Section 4 :- Analysis

a) `df['column']` → univariate()

`describe()`, `ASSC()`, `value_count()`

b) Bivariate: `groupby()`, `crosstab()`

`sort_values()`, `set_index()`



