

Merge API Parameter Not Explicitly Set

Context

The `df.merge()` API **merges two DataFrames** in Pandas.

Problem

Although using the default parameter can produce the same result, **explicitly specify on and how and validate produce better readability.**

The parameter `on` states **which columns to join on**, and the parameter `how` **describes the join method (e.g., outer, inner)**. Also, the `validate` parameter will check **whether the merge is of a specified type**.

If the developer assumes the merge keys are unique in both left and right datasets, but that is not the case, and he does not specify this parameter, **the result might silently go wrong.**

Solution

Developer should **explicitly specify ALL the parameters specified:**

- 1- `on`
- 2- `how`
- 3- `validate`

If one of this parameter is not present in the API call, the problem still persists.

Existing Stage

Data Cleaning

Effect

Readability & Error-prone

Examples at next page.

Example

Python

```
import pandas as pd
df1 = pd.DataFrame({'key': ['foo', 'bar', 'baz', 'foo'],
                    'value': [1, 2, 3, 5]})
df2 = pd.DataFrame({'key': ['foo', 'bar', 'baz', 'foo'],
                    'value': [5, 6, 7, 8]})
- df3 = df1.merge(df2)
+ df3 = df1.merge(
+     df2,
+     how='inner',
+     on='key',
+     validate='m:m'
+ )
```