# Extracting and changing DataFrame data

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# Slicing rows

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# Boolean selection of rows

# How selecting works

- A boolean operation is done on a column. Any common operation (**==**, **<**, **>**, etc.) is possible.

- That generates a series of boolean values (**True** or **False**) the same length as the number of table rows.

- If the series item corresponding to the row is **True**, the row is included. If the series item for that row is **False**, the row is excluded.

- The resulting DataFrame maintains the label indices of the original DataFrame.
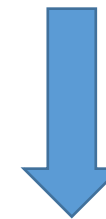
# Selection indexing process

**organism_info**

| label (position) | group (0) | number legs (1) |
|---|---|---|
| 'lizard' (0) | 'reptile' | 4 |
| 'spider' (1) | 'arachnid' | 8 |
| 'worm' (2) | 'annelid' | 0 |
| 'bee' (3) | 'insect' | 6 |

**Insert this boolean series as the index for .loc (in the square brackets).**

| organism_info['number legs'] > 5 |
|---|
| False |
| True |
| False |
| True |

| label (position) | group (0) | number legs (1) |
|---|---|---|
| 'spider' (0) | 'arachnid' | 8 |
| 'bee' (1) | 'insect' | 6 |

`organism_info.loc[organism_info['number legs'] > 5]`

# Changing values by boolean condition

# Iterating through rows

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