

# Fill in Missing Values and Sum Values with Pivot Tables

The screenshot shows a web browser window displaying a DataCamp exercise. The browser tabs include 'Data Analysis and AI - Data An...', 'Fill in missing values and sum v...', 'ChatGPT - doc maker', and 'Exclude Indian Movies'. The address bar shows the URL 'campus.datacamp.com/courses/data-manipulation-with-pandas/aggregating-dataframes?ex=15'. A warning message at the top states: 'You are using an unsupported command-line flag: --unsafely-treat-insecure-origin-as-secure=http://54.173.176.93:4444. Stability and security will suffer.'

The exercise page has a header with 'Learn / Courses / Data Manipulation with pandas' and a 'Course Outline' button. The main content area is titled 'Exercise' and 'Fill in missing values and sum values with pivot tables'. It explains that the `.pivot_table()` method has several useful arguments, including `fill_value` and `margins`. It defines `fill_value` as replacing missing values with a real value (known as imputation) and `margins` as a shortcut for pivoting by two variables while also showing row and column totals. The exercise instructions state: 'In this exercise, you'll practice using these arguments to up your pivot table skills, which will help you crunch numbers more efficiently! sales is available and pandas is imported as pd.'

The 'Instructions 1/2' section contains two tasks:

1. Print the mean `weekly_sales` by department and type, filling in any missing values with 0.
2. Print the mean `weekly_sales` by department and type, filling in any missing values with 0 and summing all rows and columns.

A 'Take Hint (-15 XP)' button is available for the first instruction.

On the right, there is a code editor with a 'script.py' file containing the following code:

```
1 # Print mean weekly_sales by department and type; fill missing values with 0
2 print(sales.pivot_table(_____))
```

Below the code editor is a 'Python Shell' with a 'Slides' tab. The shell shows 'In [1]:'.

At the bottom of the interface, there is a Windows taskbar with various icons and a system clock showing '15:44' on '25/11/2024'.

The `.pivot_table()` method has several useful arguments, including `fill_value` and `margins`.

`fill_value` replaces missing values with a real value (known as imputation). `margins` is a shortcut for when you pivoted by two variables, but also wanted to pivot by each of those variables separately: it gives the row and column totals of the pivot table contents.

In this exercise, you'll practice using these arguments to up your pivot table skills, which will help you crunch numbers more efficiently!

`sales` is available and `pandas` is imported as `pd`.

## Final Answer - Instruction 1

```
# Print mean weekly_sales by department and type; fill missing values with 0
print(sales.pivot_table(values="weekly_sales", index="department",
columns="type", fill_value=0))
```