

# Example “Inc5000”

A simple demo project that does the following:

- Loads a list of 5000 companies from a database (comes with the example). It includes the number of workers, revenue, state code and industry for each company. The list only includes companies with number of workers greater than *Min workers* parameter.
- Calculates a new column using expression.
- Merges full state names from another table (loaded from a CSV file).
- Counts number of companies in each state.
- Exports final result into a spreadsheet.
- Generates a simple PDF report.

## How to use this example

- Open the project – it will run all actions automatically (except the “Export to text file” action, see [1]).
- Notice parameter *Min workers* in the side bar. Change it to 500 and see how the chart and data in tables are automatically updated.
- Click action icons in tables to explore action properties (shown in the sidebar) and their results (shown in the data grid). Explore properties of the “Merge another table” action. Notice that the dotted line from the *States* table points right into the “Merge” action showing a dependency.

The screenshot displays the EasyMorph interface with several components:

- States Table:** A table with columns `state_long` and `state_short`. It lists states like California (CA), Virginia (VA), Massachusetts (MA), Maine (ME), Arizona (AZ), Oregon (OR), North Carolina (NC), Colorado (CO), and Kansas (KS). A blue arrow labeled "Import" points to the table's header.
- Companies Table:** A table with columns `rank`, `company`, `Revenue per...`, `city`, `state_uppercase`, and `metro`. It lists companies like One Techno..., ProKarma, Snap Fitness, Core Netwo..., GourmetGift..., Xtreme Cons..., ReSource Pro, LifeMatters, Adjucent, Radius (Ann..., Ntiva, and Prep Sports... with their respective revenue, cities, and state abbreviations. A blue arrow labeled "Merge table" points to the `state_uppercase` column.
- Export: Companies by state Table:** A table with columns `state_long` and `# of compan...`. It shows the count of companies for each state: California (311), Texas (220), New York (163), Virginia (147), Florida (144), Illinois (129), Georgia (115), Pennsylvania (92), and Massachusetts (90). A blue arrow labeled "Export" points to the table's header.
- Number of Companies by Industry Chart:** A horizontal bar chart showing the number of companies in various industries. The Y-axis lists industries like IT Services, Health, Business Products & Services, Software, Advertising & Marketing, Financial Services, Government Services, Human Resources, and Manufacturing. The X-axis represents the number of companies, ranging from 0 to 450. A blue arrow labeled "Export" points to the chart's header.

- Press “Run project” button on the Main toolbar (or F5) to run the remaining uncalculated action which is the export action. Find Report.xlsx in the example folder, and open it in Excel. See that it now has data from “Export...” table in EasyMorph.
- Return to EasyMorph. Filter states in “Companies”: right-click the header of column `state_uppercase` column, select “Filter...”, pick a few states in the checklist, and press Apply.

Notice that the project was recalculated automatically and tables and chart now contain only the selected states.

## Notes

1. Export actions are considered *side-effect actions*. Such actions can change data in external files and systems, and therefore are not calculated automatically in order to avoid unnecessary or undesired modifications. Besides all export actions, side-effect actions also include “Run external program”, “Iterate external program”, “Database command”, “PowerShell”, and a few more. Side-effect actions should be run manually, by clicking “Run project” button, or pressing F5.