

**cross** — Form every pairwise combination of two datasets

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## Description

`cross` forms every pairwise combination of the data in memory with the data in *filename*. If *filename* is specified without a suffix, `.dta` is assumed.

## Quick start

Form every pairwise combination of observations from `mydata1.dta` in memory with observations from `mydata2.dta`

```
cross using mydata2
```

## Menu

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## Syntax

```
cross using filename
```

`cross` does not allow alias variables; see [\[D\] frunalias](#) for advice on how to get around this restriction.

## Remarks and examples

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This command is rarely used; also see [\[D\] joinby](#), [\[D\] merge](#), and [\[D\] append](#).

Crossing refers to merging two datasets in every way possible. That is, the first observation of the data in memory is merged with every observation of *filename*, followed by the second, and so on. Thus the result will have  $N_1N_2$  observations, where  $N_1$  and  $N_2$  are the number of observations in memory and in *filename*, respectively.

Typically, the datasets will have no common variables. If they do, such variables will take on only the values of the data in memory.

### ► Example 1

We wish to form a dataset containing all combinations of three age categories and two sexes to serve as a stub. The three age categories are 20, 30, and 40. The two sexes are male and female:

```
. input str6 sex
      sex
  1. male
  2. female
  3. end
. save sex
file sex.dta saved
. drop _all
. input agecat
      agecat
  1. 20
  2. 30
  3. 40
  4. end
. cross using sex
. list
```

	agecat	sex
1.	20	male
2.	30	male
3.	40	male
4.	20	female
5.	30	female
6.	40	female

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## References

- Baum, C. F. 2016. *An Introduction to Stata Programming*. 2nd ed. College Station, TX: Stata Press.
- Franklin, C. H. 2006. *Stata tip 29: For all times and all places*. *Stata Journal* 6: 147–148.

## Also see

- [D] [append](#) — Append datasets
- [D] [fillin](#) — Rectangularize dataset
- [D] [frunalias](#) — Change storage type of alias variables
- [D] [joinby](#) — Form all pairwise combinations within groups
- [D] [merge](#) — Merge datasets
- [D] [save](#) — Save Stata dataset

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