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Description

`cf` compares *varlist* of the dataset in memory (the master dataset) with the corresponding variables in *filename* (the using dataset). `cf` returns nothing (that is, a return code of 0) if the specified variables are identical and a return code of 9 if there are any differences. Only the variable values are compared. Variable labels, value labels, notes, characteristics, etc., are not compared.

Quick start

Compare values of `v1` and `v2` from `mydata1.dta` in memory to `mydata2.dta`

```
cf v1 v2 using mydata2
```

As above, but give a detailed listing of the differences

```
cf v1 v2 using mydata2, verbose
```

As above, but for all variables in memory

```
cf _all using mydata2, verbose
```

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Syntax

```
cf varlist using filename [, all verbose]
```

Options

`all` displays the result of the comparison for each variable in *varlist*. Unless `all` is specified, only the results of the variables that differ are displayed.

`verbose` gives a detailed listing, by variable, of each observation that differs.

Remarks and examples

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cf produces messages having the following form:

```
varname: does not exist in using
varname: __ in master but __ in using
varname: __ mismatches
varname: match
```

An example of the second message is “str4 in master but float in using”. Unless `all` is specified, the fourth message does not appear—silence indicates matches.

► Example 1

We think the dataset in memory is identical to `mydata.dta`, but we are unsure. We want to understand any differences before continuing:

```
. cf _all using mydata
. _
```

All the variables in the master dataset are in `mydata.dta`, and these variables are the same in both datasets. We might see instead

```
. cf _all using mydata
      mpg:  2 mismatches
      headroom: does not exist in using
      displacement: does not exist in using
      gear_ratio: does not exist in using
r(9);
```

Two changes were made to the `mpg` variable, and the `headroom`, `displacement`, and `gear_ratio` variables do not exist in `mydata.dta`.

To see the result of each comparison, we could append the `all` option to our command:

```
. cf _all using mydata, all
      make: match
      price: match
      mpg:  2 mismatches
      rep78: match
      headroom: does not exist in using
      trunk: match
      weight: match
      length: match
      turn: match
      displacement: does not exist in using
      gear_ratio: does not exist in using
      foreign: match
r(9);
```

For more details on the mismatches, we can use the verbose option:

```
. cf _all using mydata, verbose
      mpg: 2 mismatches
           obs 1. 22 in master; 33 in using
           obs 2. 17 in master; 33 in using
      headroom: does not exist in using
      displacement: does not exist in using
      gear_ratio: does not exist in using
r(9);
```

This example shows us exactly which two observations for mpg differ, as well as the value stored in each dataset. ◀

▶ Example 2

We want to compare a group of variables in the dataset in memory against the same group of variables in mydata.dta.

```
. cf mpg headroom using mydata
      mpg: 2 mismatches
      headroom: does not exist in using
r(9);
```

◀

Stored results

cf stores the following in r():

```
Macros
      r(Nsum)      number of differences
```

Methods and formulas

If you are using Small Stata, you may get the error “too many variables” when you stipulate `_all` and have many variables in your dataset. (This will not happen if you are using Stata/MP, Stata/SE, or Stata/IC.) If this happens, you will have to perform the comparison with groups of variables. See [example 2](#) for details about how to do this.

Acknowledgment

Speed improvements in cf were based on code written by David Kantor.

Reference

Gleason, J. R. 1995. [dm36: Comparing two Stata data sets](#). *Stata Technical Bulletin* 28: 10–13. Reprinted in *Stata Technical Bulletin Reprints*, vol. 5, pp. 39–43. College Station, TX: Stata Press.

Also see

[D] [compare](#) — Compare two variables