

Shell commands: tsort

❑ tsort lets you sort data based on any ordering criteria you wish

◆ In fact, the data provide the definition of the ordering criteria

✗ So tsort does not [necessarily] sort in alphabetic or collating sequence

❑ Suppose a couple, let's call them John and Jane, are discussing where they are interested in taking their vacation

◆ They agree to use tsort to help them make their final decisions; a conversation might go like this:

So where would you like to travel to?

Well, I've always wanted to see Germany and France.

Mmm. Me too. Which would you put higher on your list?

Ahh, France, I think.

OK. (enters this in a file called 'vacation': France Germany)
I'd like to visit Indonesia or Hawaii.

Which is higher on your list?

I think Indonesia. (enters: Indondesia Hawaii)

How would you rank Indonesia compared to France?

I guess I'd put Indonesia first. (enters: Indonesia France)

Oh, don't forget England.

Right, right. (enters: England England)

And Japan. In fact, put Japan ahead of France.

OK. (enters: Japan France)

Well, let's see where we are so far.

Shell commands: tsort, continued

- ❑ **The file at this point reads:**

```
France      Germany
Indonesia   Hawaii
Indonesia   France
England     England
Japan       France
```

- ❑ **If John and Jane used tsort now, it would look like this:**

```
tsort      vacation
```

```
Indonesia
Japan
France
Germany
Hawaii
England
```

- ❑ **By extension, you can see [hopefully] how this could be very handy, especially when the list gets quite long**

Shell commands: tsort, continued

❑ tsort works like this:

◆ The input consists of pairs of entries; these pairs define the ordering you want

✗ If the values are different, the first is to precede the second

✗ If the values are the same, it is just an indication of presence

◆ tsort creates a list using this ordering and writes it to stdout

✗ Duplicates are omitted

✗ Entries that are not ordered appear at the end

✗ If you have a circular / logic error in your data pairings, you get an error message

➤ For example, if you had **France Germany** as one entry and **Germany France** as another

➤ It even catches more circular errors