Practice 5.5
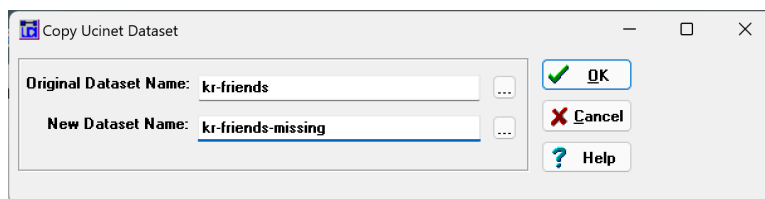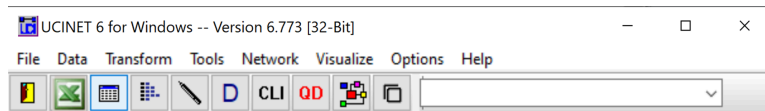
This document uses the kr-friends dataset created in Practice 5.4. We are going to remove some rows to simulate missing data, then replace the missing data with imputed values.

Creating missing values

We begin by creating a copy of kr-friends to be called kr-friends-missing. Use File| Copy and fill out the box like this:

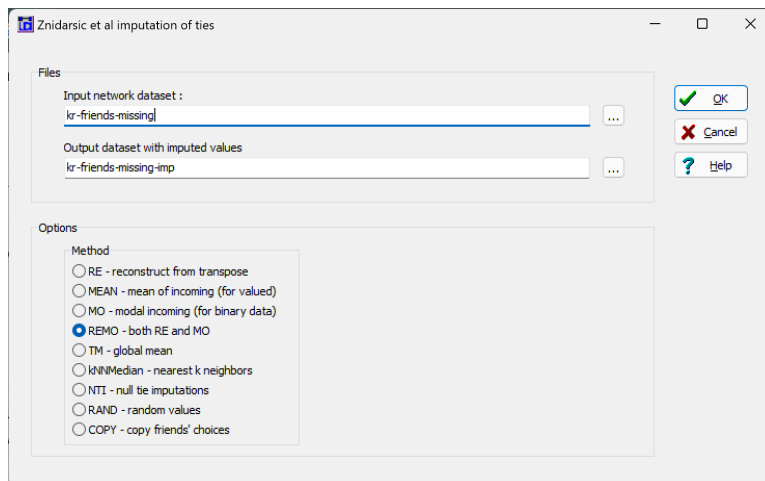Then open kr-friends-missing in the matrix editor (3rd button on the left on the toolbar).

Now delete all values in row A04 and A06 as shown below, and save.

Imputing missing values

At this point kr-friends-missing contains two rows of missing values. To impute their values, we can use Transform|Znidarsic et al Imputation of Missing Values, filling out the dialog window as follows:

As explained in the Help, the REMO option both reconstructs the missing rows from their corresponding columns, but where that provides no help, the program also selects a modal incoming value. For example, if most people have a tie to a given actor, in the absence of other information, the program will assume that A04 and A06 also have a tie to that actor.

As you can see, in the result matrix, there are now values for the rows corresponding to A04 and A06.

```
             1  2  3  4  5  6  7  8  9 10 11 12 13 14 15 16 17 18 19 20 21
            A0 A0 A0 A0 A0 A0 A0 A0 A0 A1 A1 A1 A1 A1 A1 A1 A1 A1 A1 A2 A2
             1  2  3  4  5  6  7  8  9  0  1  2  3  4  5  6  7  8  9  0  1
            -- -- -- -- -- -- -- -- -- -- -- -- -- -- -- -- -- -- -- -- --
    1 A01       1  0  1  0  0  0  1  0  0  0  1  0  0  0  1  0  0  0  0  0
    2 A02    1     0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  1  0  0  1
    3 A03    0  0     0  0  0  0  0  0  0  0  0  0  1  0  0  0  0  1  0  0
    4 A04    1  0  0     0  0  0  1  0  0  1  1  0  0  0  0  1  0  0  0  0
    5 A05    0  1  0  0     0  0  0  1  0  1  0  0  1  0  0  1  0  1  0  1
    6 A06    0  0  0  0  0     0  0  0  0  0  0  0  0  1  0  1  0  0  0  0
    7 A07    0  0  0  0  0  0     0  0  0  0  0  0  0  0  0  0  0  0  0  0
    8 A08    0  0  0  1  0  0  0     0  0  0  0  0  0  0  0  0  0  0  0  0
    9 A09    0  0  0  0  0  0  0  0     0  0  0  0  0  0  0  0  0  0  0  0
```

```
10 A10  0  0  1  0  1  0  0  1  1     0  1  0  0  0  1  0  0  0  1  0
11 A11  1  1  1  1  1  0  0  1  1  0     1  1  0  1  0  1  1  1  0  0
12 A12  1  0  0  1  0  0  0  0  0  0  0     0  0  0  0  1  0  0  0  1
13 A13  0  0  0  0  1  0  0  0  0  0  1  0     0  0  0  0  0  0  0  0
14 A14  0  0  0  0  0  0  1  0  0  0  0  0  0     1  0  0  0  0  0  0
15 A15  1  0  1  0  1  1  0  0  1  0  1  0  0  1     0  0  0  1  0  0
16 A16  1  1  0  0  0  0  0  0  0  0  0  0  0  0  0     0  0  0  0  0
17 A17  1  1  1  1  1  1  1  1  1  1  1  1  0  1  1  1     0  1  1  1
18 A18  0  1  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0     0  0  0
19 A19  1  1  1  0  1  0  0  0  0  0  1  1  0  1  1  0  0  0     1  0
20 A20  0  0  0  0  0  0  0  0  0  0  1  0  0  0  0  0  0  1  0     0
21 A21  0  1  0  0  0  0  0  0  0  0  0  1  0  0  0  0  1  1  0  0
```