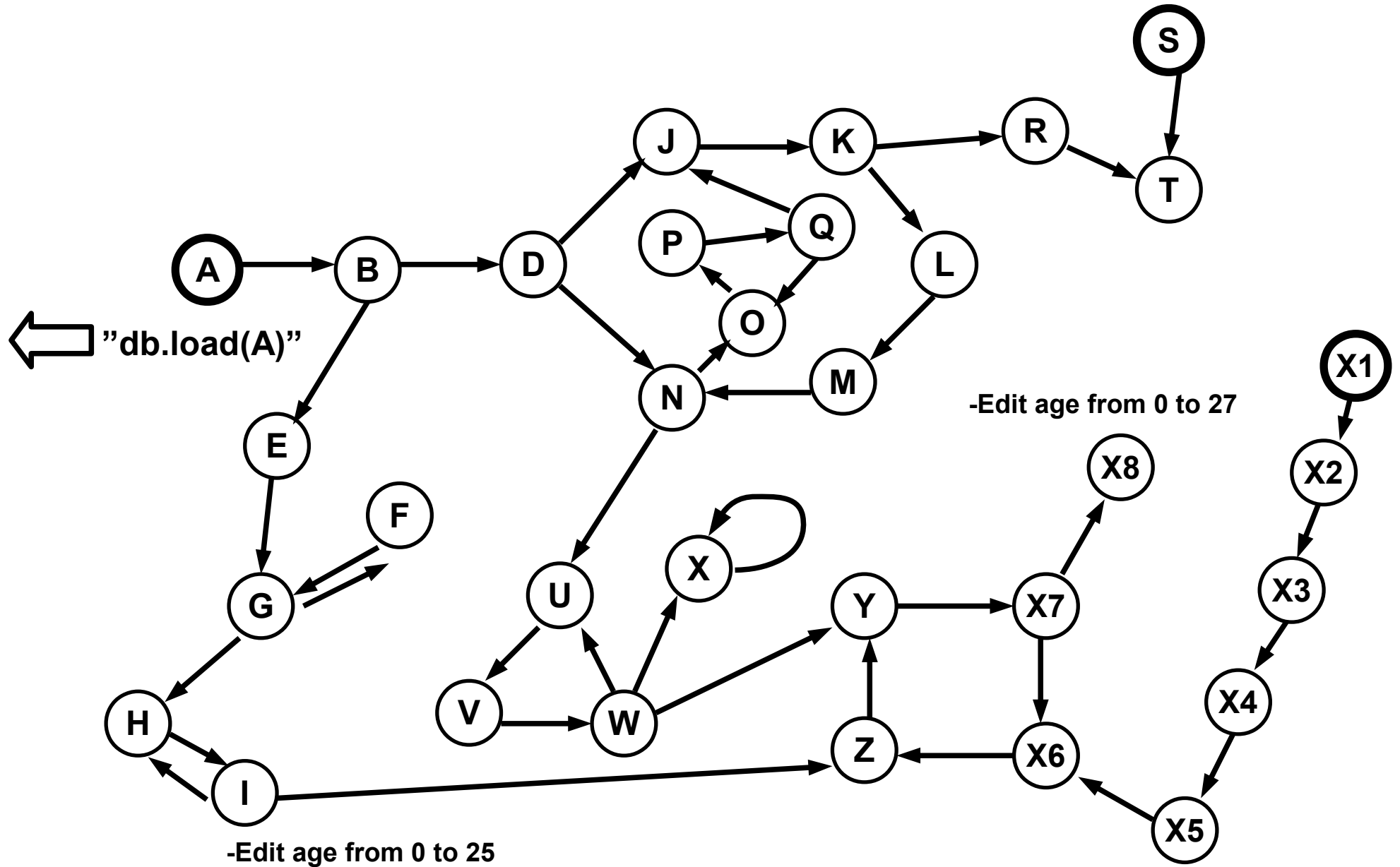


**FIG. 1A**

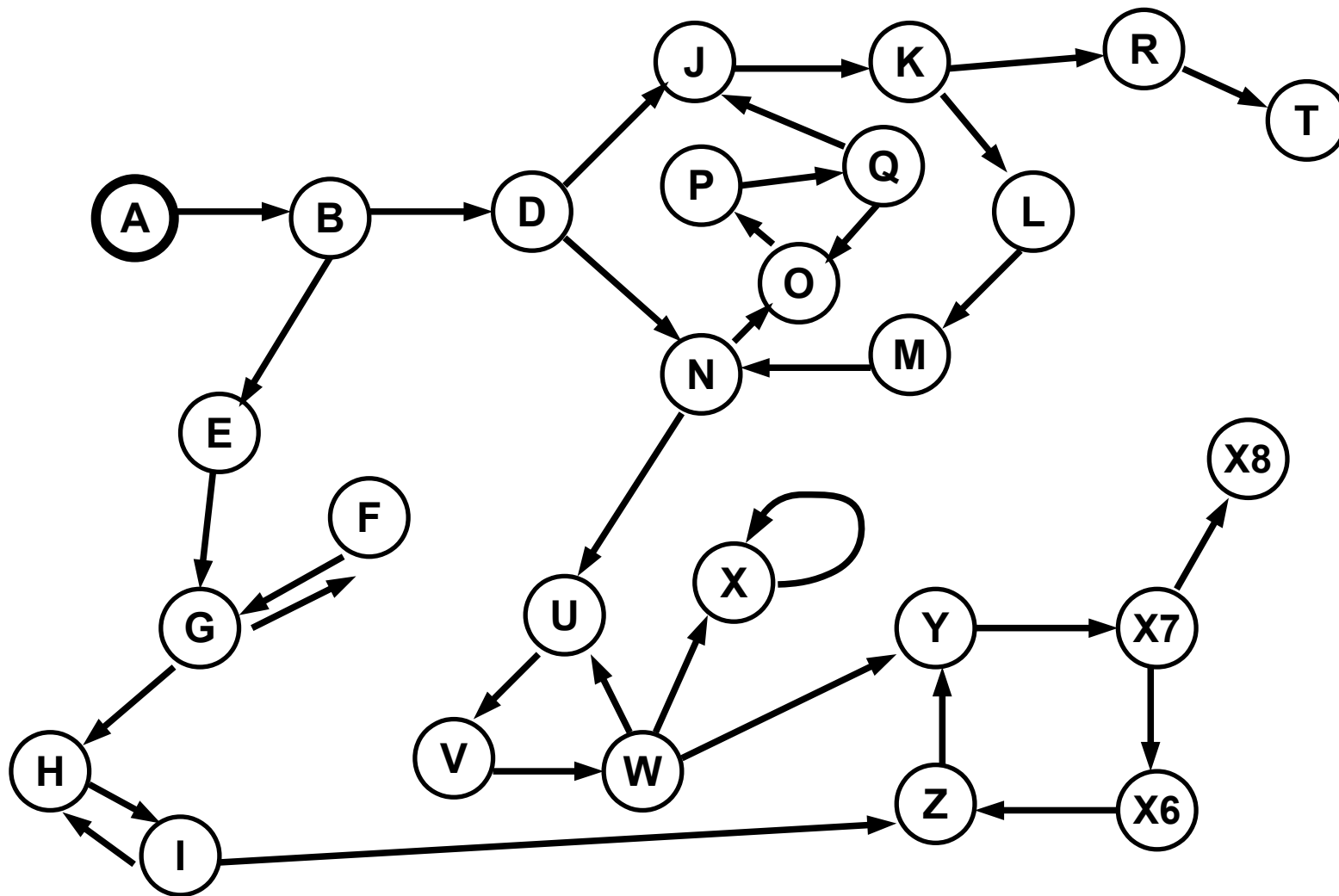
**Original Graph in the Object Database**

- Nodes A, S and X1 are persistent root nodes



**FIG. 1B**

**Load Graph A in the Run-Time Memory**

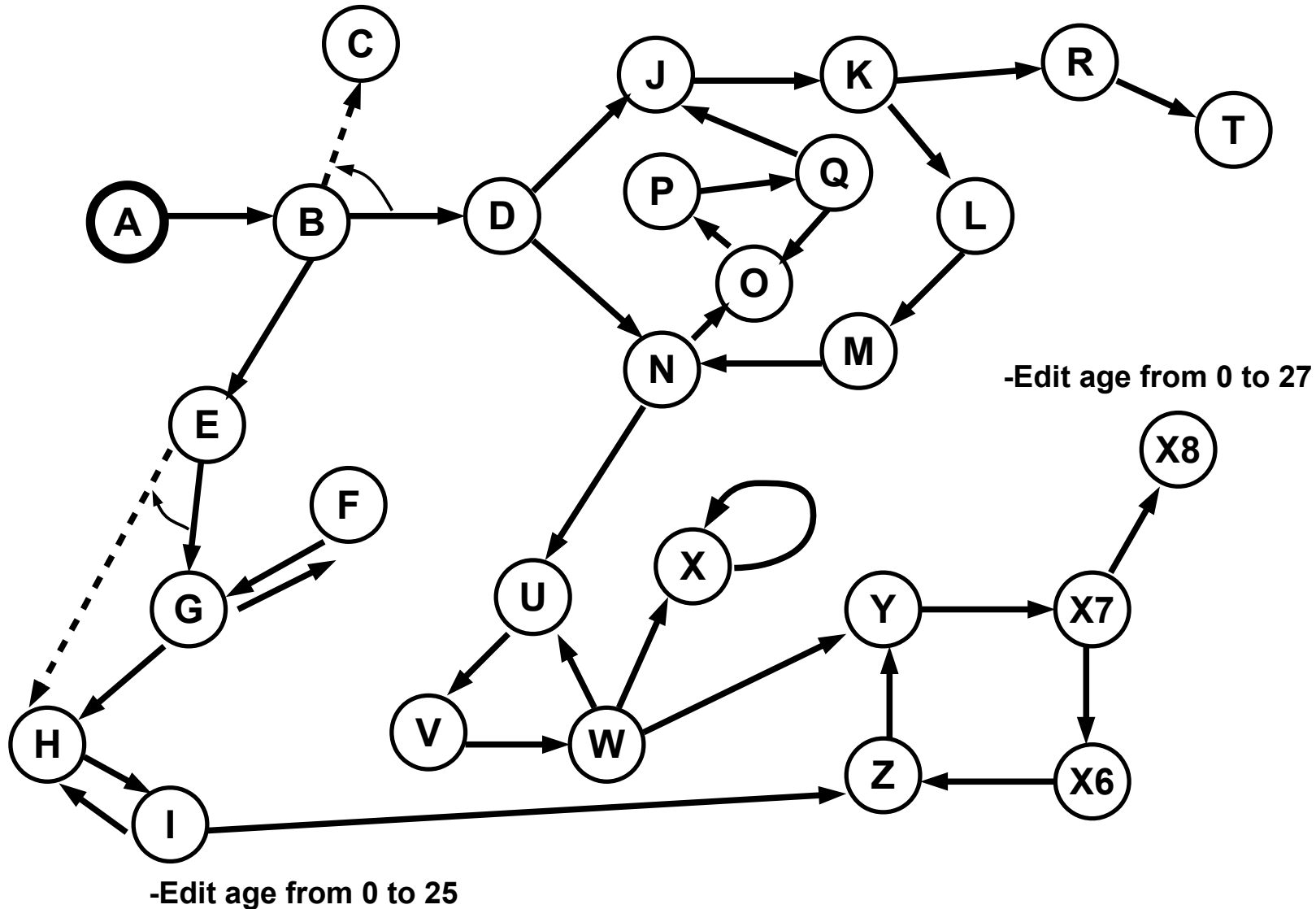


**FIG. 1C**

## **Modify Graph in the Run-Time Memory**

Complex modifications for complex object structure A:

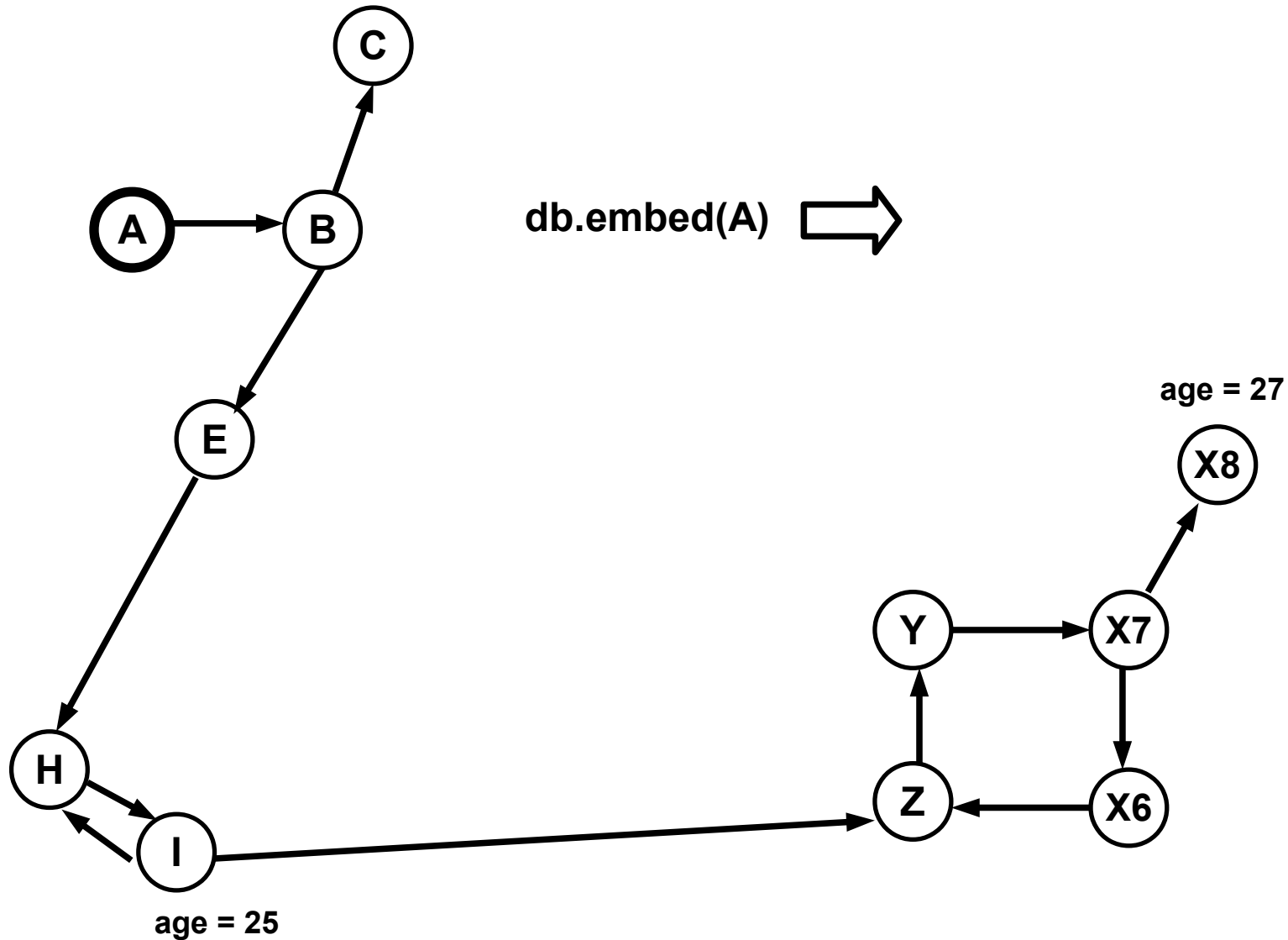
- B refers now to C, not to D
- E refers now to H, not to G
- Age of I is now 25
- Age of X8 is now 27



**FIG. 1D**

**Modified Graph In the Run-Time Memory**

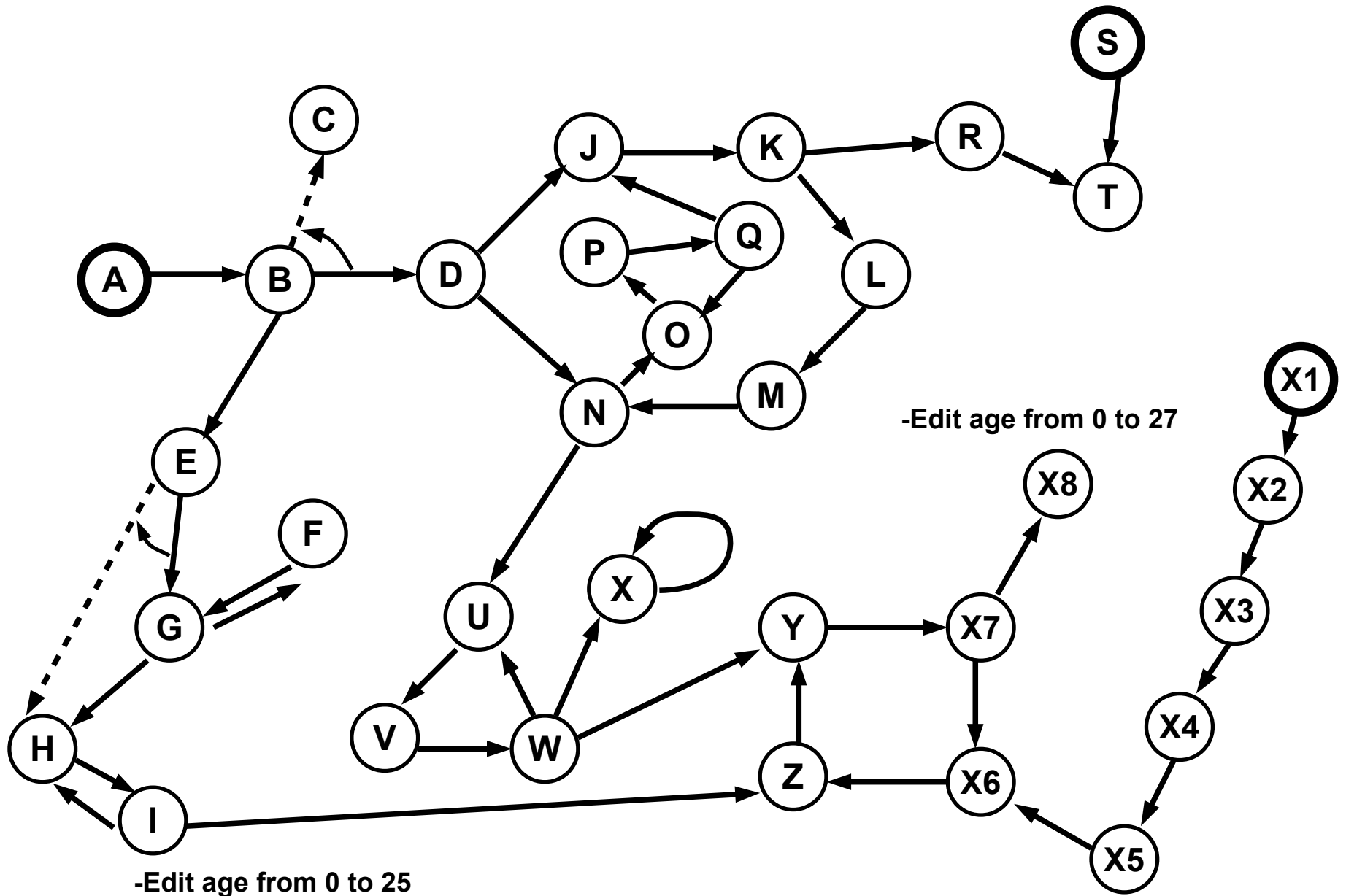
- After complex modifications for complex object structure A
- Call the embed method for A



**FIG. 1E**

**Embedded Graph In the Object Database**

- before the embed method has executed garbage collection phase in the object database



# Embedded Graph in the Object Database

**FIG. 1F**

Final results when the embed method has finished:

- Large parts of the network removed automatically
- Objects C created automatically
- References between objects updated accordingly
- Scalar fields (age) updated accordingly
- Objects have correct reference counts in the database and the database is in a consistent state!

