Practice Exercise for CS 4440
(Stable Matching Problem)

INPUT

Xavier   Amy   Bertha   Clare
Yancey   Bertha   Amy   Clare
Zeus   Amy   Bertha   Clare

Amy   Yancey   Xavier   Zeus
Bertha   Xavier   Yancey   Zeus
Clare   Xavier   Yancey   Zeus

Gale-Shapley ALGORITHM RUN script

Xavier proposes to Amy.
Amy pairs with Xavier because she is free.
Yancey proposes to Bertha.
Bertha pairs with Yancey because she is free.
Zeus proposes to Amy.
Amy rejects Zeus because she likes her current match, Xavier, more.
Zeus remains free.
Zeus proposes to Bertha.
Bertha rejects Zeus because she likes her current match, Yancey, more.
Zeus remains free.
Zeus proposes to Clare.
Clare pairs with Zeus because she is free.
Now everyone has a match.

Here Are The Matches:

    WOMEN   MEN
    Amy   Xavier
    Bertha   Yancey
    Clare   Zeus

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PROCESS THIS INPUT LIKE THE INPUT ABOVE WAS PROCESSED
and produce the same kind of script of the actions
taken by the Gale-Shapley algorithm, plus
write what the final matching is.

The men are X, Y, and Z. The women are A, B, and C.

X C A B
Y B C A
Z B A C

A Y X Z
B Z X Y
C Y X Z

Gale-Shapley ALGORITHM RUN script

X proposes to C.
C pairs with X because she is free.
Y proposes to B.
B pairs with Y because she is free.
Z proposes to B.
B rejects Y because she likes Z more than her current match, Yancey... (B prefers Z over Y).
B pairs with Z.
Y remains free.
Y proposes to C.
C rejects X because she likes Y more than her current match, X.
C pairs with Y.
X remains free.
X proposes to A.
A pairs with X because she is free.
Now everyone has a match.

Here Are The Matches:

    WOMEN   MEN
    A   X
    B   Z
    C   Y