

EXERCISE

(MANIPULATION IN STABLE MATCHING PROBLEM)

Stable matching problem

- Consider a **stable matching problem** with
 - ▣ Three men X, Y, Z
 - ▣ Three women A, B, C
 - ▣ The preferences profile is on the right
 - ▣ The matching obtained by applying Gale-Shapley algorithm is $M = \{ (X,A), (Y,C), (Z,B) \}$
- Is there a man or a woman that **can profit** from lying in this preference profile?

Men

X: $C > A > B$

Y: $C > A > B$

Z: $C > A > B$

Women

A: $X > Y > Z$

B: $Z > Y > X$

C: $Y > Z > X$