Attendance Quiz for Lecture 21

NAME: (print!) _____

E-MAIL ADDRESS: (print!) _____

1. There are Four women $1, 2, 3, 4$ and four men a, b, c, d

- Ms. 1 knows Mr a and Mr. b
- Ms. 2 knows Mr b and Mr. c
- Ms. 3 knows Mr a and Mr. d
- Ms. 4 knows Mr c and Mr. d

(i): Check that the conditions of Hall'e Theorem are satisfied, i.e. for each of the 15 non-empty subsets of the st of women, they know collectively at least as many men.

(ii)

Currently there are only three married couples:

- Ms. 2 and Mr. b
- Ms. 3 and Mr. a
- Ms. 4 and Mr. c

But poor Ms. 1 she is single, and the only two men she knows (namely Mr. a and Mr. b) are currently married. Use the **alternating path algoritm** to produce four married couples (no credit for other methods).