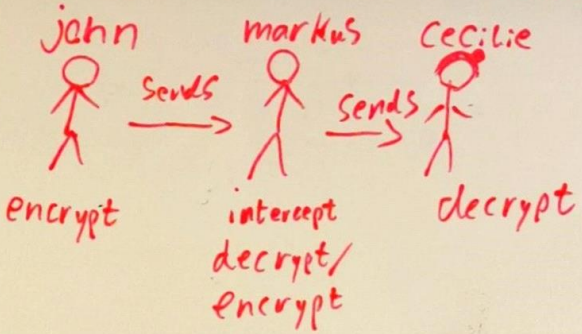
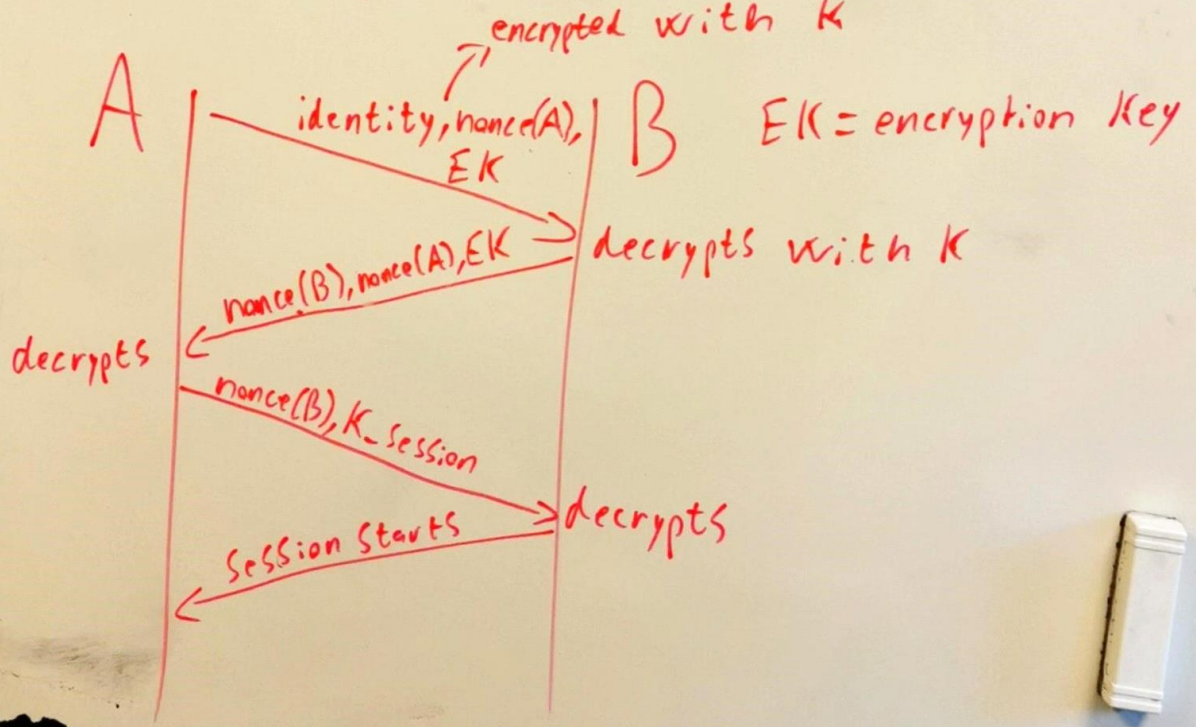
Problem 3

man in the middle

Yes



Problem 4