

INF2140: Exercises Week 6
(CHAPTER: MONITORS AND CONDITION SYNCHRONIZATION, PART 2)

1. Exercise 5.4 from the book:
2. Model the pot process of exercise 1 using semaphores and implement it in Java.
3. Exercise 5.5 from the book.
4. Exercise 5.6 from the book.
5. The Bar: In a cocktail bar we find two bartenders. Both randomly dispense rum and coke in a shared glass. Three customers with different tastes want to be served: the first one prefers pure rum, the second one likes cuba libre, a mixture of rum and coke, and the last one only drinks coke. Drinking and serving occur in turns. A drink comprises two units. For example, a coke drink consists of two units of coke. Each bartender dispenses one unit at a time. Depending on what they serve, one of the customers will drink. Once the drink has been consumed, the bartenders serve the next drink, and so on. Only drinks consisting of two units are drunk, and a glass will only be refilled once it is completely empty. Model this problem in FSP using condition synchronization and semaphores (if needed).

HINT: You can give priority to bartender_1 to dispense his unit before bartender_2

6. Model the exercise 5 using only semaphores