

**Cosc 4740**  
**Written Q14**

Worth 15 points

*All answers are to be typed. This is **NOT** a programming assignment, no compiler needed, which also means it is due at class time.*

Suppose a computer center has two printers, A and B, that are similar but not identical. Three kinds of processes use the printers: those that must use A, those that must use B, and those that can use either A or B.

A process calls request function to request a printer. This function returns the identity of a free printer. After using that printer, the process returns it by calling the release function. Implement request and release functions for the three kinds of processes. Use Monitors for synchronization. Your solution should be fair and deadlock free assuming that a process using a printer eventually releases it.

Lastly, this is pseudo code, so you can say things like, Return printerA for example. We are assuming printerA is a printer to the printer called A.