**Introduction to Operating Systems**

**COP 4600**

Name and ID \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Worksheet #13**

Q1. Consider the following page reference string:

4 7 8 3 4 7 5 4 7 8 3 5

How many page faults would occur for the following replacement algorithms, assuming a) three frames, b) four frames?

All frames are initially empty, so your first unique pages will all cost one fault each.

1. FIFO
2. 4 7 8 3 4 7 5 4 7 8 3 5
3. 4 7 8 3 4 7 5 4 7 8 3 5

Discuss clearly whether the different number of page faults obtained above under the different number of frames is to be expected and why?

1. Optimal replacement
2. 4 7 8 3 4 7 5 4 7 8 3 5
3. 4 7 8 3 4 7 5 4 7 8 3 5
4. LRU replacement
5. 4 7 8 3 4 7 5 4 7 8 3 5
6. 4 7 8 3 4 7 5 4 7 8 3 5

Q2. Explain the second-chance replacement algorithm?