**Introduction to Operating Systems**

**COP 4600-001**

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

**Worksheet #14**

Q1. What is cause of trashing?

Answer:

Q2. Assume that in a paging system a process is given 2 frames. The frames are 512 words long. Assume that all of instruction for the process fit perfectly in the first frame. A 128 by 1024 two-dimensional array, A, is declared by the process and the second frame is to be used when an array element is referenced. The elements of the array fit perfectly in the appropriate number of logical pages and no other data or instructions are included in these pages – only array elements. The array is stored in COLUMN MAJOR. Assume that it takes a word to store a value in each array position.

Consider the following loop that manipulates the array elements:

for i= 0 to 127 do

for j = 0 to 1023 do

A[i][j] = 0

How many total number of page faults will be generated by the statement A[i][j] = 0 in the loop above?

**Answer: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

How many total number of page faults will be generated by the statement A[i][j] = 0 in the loop above?

for j= 0 to 1023 do

for i = 0 to 127 do

A[i][j] = 0

**Answer: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**