**Programming Assignment 5**

# Objective

The objective of this assignment is to become familiar with the virtual memory address page replacement algorithms

# Assignment: Implementing the page replacement algorithm

Write a C/C++ program that implements the FIFO, LRU, and optimal page replacement algorithms presented in this chapter. First, generate a random page-reference string where page numbers range from 0 to 9.

Apply the random page-reference string to each algorithm, and record the number of page faults incurred by each algorithm.

As an example, your program would run as follows:

**./vmmpr 1, 2, 3, 4, 5, 3, 4, 1, 6, 7, 8, 7, 8, 9, 7, 8, 9, 5, 4, 5, 4, 2.**

Your program would output the total number of page faults for each algorithm based upon the supplied reference string.

**Error Handling**

Perform the necessary error checking to ensure the correct number of command-line parameters. Assume a reference string maximum of 40 numbers.

# Grading

The program will be graded on the basic functionality, error handling and how well the implementation description was followed. Be sure to name your program **vmmpr.c** (no extra characters, capitals) Note that documentation and style are worth 10% of the assignment's grade!

# Submission

The program source code should be posted to cougar courses.