**Operating System and Design (19CS2106S)**

**Lab- 7**

**Pre-Lab:**

The brk and sbrk calls dynamically change the amount of space allocated for the data segment of the calling process. standard library functions: malloc(), calloc(), free() and realloc(). C memory functions: memcpy, memmove, memcmp, memchr, memset. C string functions .

**In-Lab:**

1. Write a program to display the address space of various segments (stack, heap, data ...etc) and show that memory address a programmer see is virtual not real.

2. Develop a program to illustrate the effect of free() on the program break. This program allocates multiple blocks of memory and then frees some or all of them, depending on its (optional) command-line arguments.

**Post-Lab:**

1. Write a simple memory allocator: memalloc is a simple memory allocator. Which uses your own malloc(), calloc(), realloc() and free() implemented using system calls.