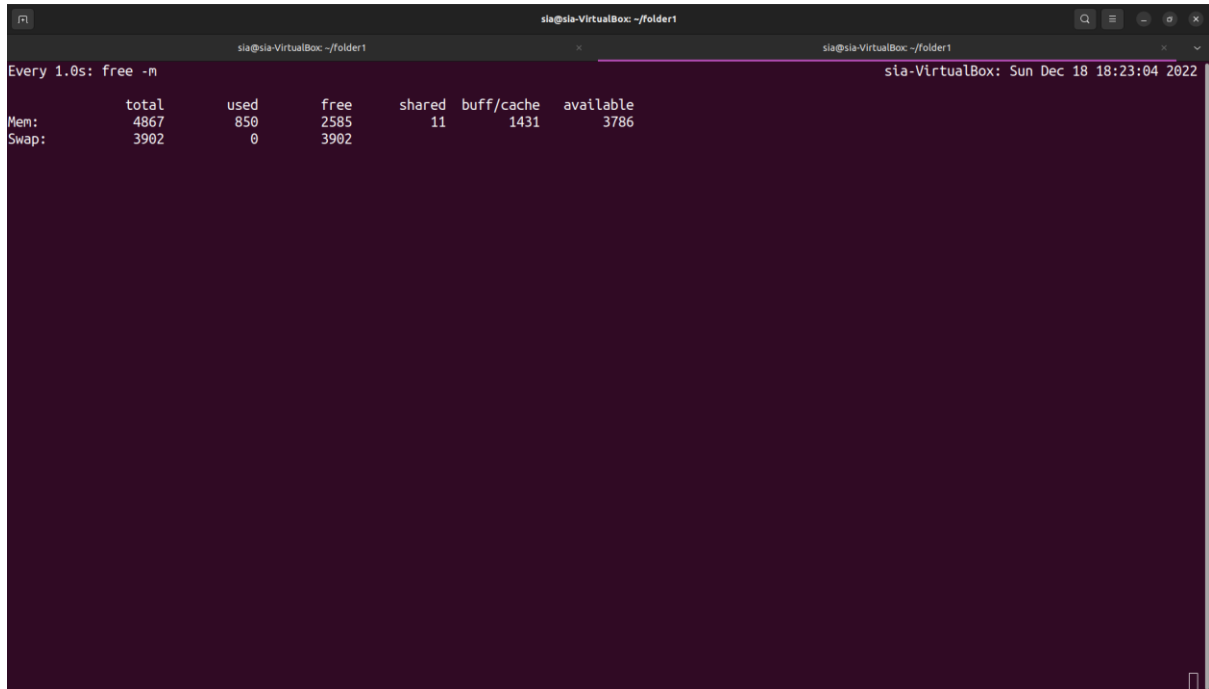


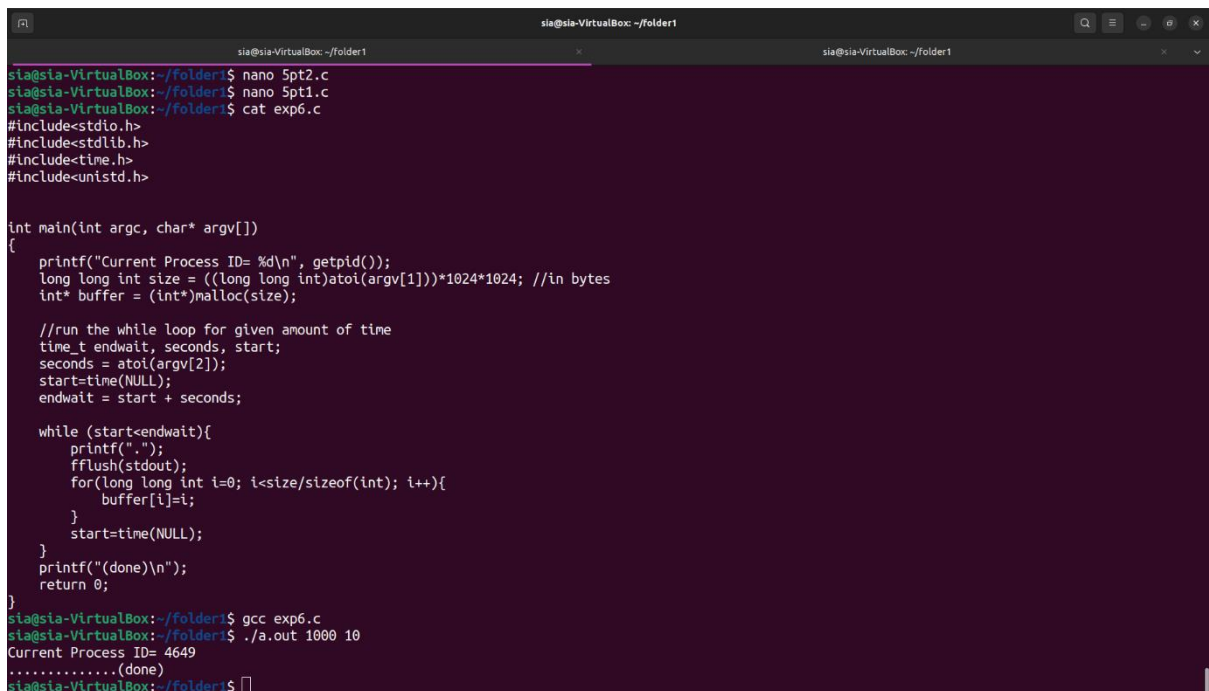
Experiment – 6

Write a C program that takes, as a command line argument, the number of megabytes of memory it will use and during execution it should consume that much memory. Observe memory usage during program execution using free command.



```
sia@sia-VirtualBox: ~/folder1
Every 1.0s: free -m
sia-VirtualBox: Sun Dec 18 18:23:04 2022
```

	total	used	free	shared	buff/cache	available
Mem:	4867	850	2585	11	1431	3786
Swap:	3902	0	3902			



```
sia@sia-VirtualBox: ~/folder1
sia@sia-VirtualBox: ~/folder1$ nano Spt2.c
sia@sia-VirtualBox: ~/folder1$ nano Spt1.c
sia@sia-VirtualBox: ~/folder1$ cat exp6.c
#include<stdio.h>
#include<stdlib.h>
#include<time.h>
#include<unistd.h>

int main(int argc, char* argv[])
{
    printf("Current Process ID= %d\n", getpid());
    long long int size = ((long long int)atoi(argv[1]))*1024*1024; //in bytes
    int* buffer = (int*)malloc(size);

    //run the while loop for given amount of time
    time_t endwait, seconds, start;
    seconds = atoi(argv[2]);
    start=time(NULL);
    endwait = start + seconds;

    while (start<endwait){
        printf(".");
        fflush(stdout);
        for(long long int i=0; i<size/sizeof(int); i++){
            buffer[i]=i;
        }
        start=time(NULL);
    }
    printf("(done)\n");
    return 0;
}
sia@sia-VirtualBox: ~/folder1$ gcc exp6.c
sia@sia-VirtualBox: ~/folder1$ ./a.out 1000 10
Current Process ID= 4649
.....(done)
sia@sia-VirtualBox: ~/folder1$
```

```
sta@sta-VirtualBox: ~/folder1
Every 1.0s: free -m
Mem:      total      used      free   shared  buff/cache   available
Swap:      3902         0      3902        11       1430        3791

sta-VirtualBox: Sun Dec 18 18:22:02 2022
```