

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.

Syntax

```
#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 int size=((longint)atoi(argv[1]))*1024*1024;
    int* buffer = (int*)malloc(size);
    time_t endwait, seconds, start;
    seconds=atoi(argv[2]);
    start= time(NULL);
    endwait= start+seconds;
    while(start<endwait){
        printf(".");
        fflush(stdout);
        for(long int i=0; i<size/sizeof(int); i++)
        {
            buffer[i] = i;
        }
        Start= time(NULL);
    }
    printf("(done)\n");
    return 0;
}
```

```
#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 int size = ((longint)atoi(argv[1]))*1024*1024;
    int* buffer = (int*)malloc(size);
    time_t endwait, seconds, start;
    seconds=atoi(argv[2]);
    start= time(NULL);
    endwait= start+seconds;
    while(start<endwait){
        printf(".");
        fflush(stdout);
        for(long int i=0; i<size/sizeof(int); i++)
        {
            buffer[i] = i;
        }
        start= time(NULL);
    }
    printf("(done)\n");
    return 0;
}
```

```
root@kali:~/C# free -m
             total        used        free      shared  buff/cache   available
Mem:          3887        888        2887           2          612        2786
Swap:          975           0          975
root@kali:~/C# free -m
             total        used        free      shared  buff/cache   available
Mem:          3887        787        2880           2          612        2885
Swap:          975           0          975
root@kali:~/C# ./C 5 100 20
Current Process ID = 1009
.....
.....
.....(done)
root@kali:~/C#
```