EXPERIMENT 6

NAME: SUDANSHI SEHGAL

ROLL NO.: 2021A1R156

SUBJECT: OPERATING SYSTEM

SEMESTER: 3rd

COURSE CODE: COM-312

CO-ORDINATER:

Ms. PRAGTI JAMWAL

Mr. SAURABH SHARMA

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 :

```c
#include<stdio.h>
#include<stlib.h>
#include<time.h>
#include<unistd.h>
int main(int argc, char* argv[])
{
  printf("Current Process ID =%d\n",getpid());
long int size= ((long int)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;

}
```

```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;
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);
long long int i;
for(i=0; i<size/sizeof(int);i++)
{
buffer[i] = i;
}

start = time(NULL);
}
printf("(done)\n");
return 0;
}
```

```
sudanshi@sudanshi:~/Desktop$ free -m
            total        used        free      shared  buff/cache   available
Mem:        10739         838        9079          37         821        9621
Swap:        2047           0        2047
sudanshi@sudanshi:~/Desktop$ ./a.out 800 20
Current Process ID = 2632
..............................(done)
sudanshi@sudanshi:~/Desktop$ free -m
            total        used        free      shared  buff/cache   available
Mem:        10739         774        9085          39         879        9682
Swap:        2047           0        2047
sudanshi@sudanshi:~/Desktop$ 
```