



EXPERIMENT 6

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CSE SEM 3

OPERATING SYSTEM (COM-312)

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.

CODE:

```
#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= ((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;  
}
```

```
#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, second, start;  
    second=atoi(argv[2]);  
    start=time(NULL);  
    endwait = start + second;  
  
    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;  
}
```

```

vanshak@HP-laptop:/mnt/d$ nano exp6.c
vanshak@HP-laptop:/mnt/d$ gcc exp6.c
vanshak@HP-laptop:/mnt/d$ free -m

```

	total	used	free	shared	buff/cache	available
Mem:	12179	3921	8033	17	223	8127
Swap:	26380	0	26380			

```

vanshak@HP-laptop:/mnt/d$ ./a.out 1500 10
Current Process ID = 38
.....(done)
vanshak@HP-laptop:/mnt/d$ free -m

```

	total	used	free	shared	buff/cache	available
Mem:	12179	3931	8024	17	223	8117
Swap:	26380	0	26380			