



Bharatiya Vidya Bhavan's
Sardar Patel Institute of Technology
Bhavan's Campus, Munshi Nagar, Andheri (West), Mumbai-400058-India
(Autonomous College Affiliated to University of Mumbai)

Information Technology Department

Academic Year: 2021-2022

Class: S.Y.B.Tech Sem.: IV Course: IT206 Operating Systems

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Class: IT (Batch-D)

Experiment No.: 5

Title: Shared Memory

Aim: First program will write state name. Second program will write district within that state.

Code:

Process 1

```
#include <error.h>
#include <fcntl.h>
#include <semaphore.h>
#include <stdio.h>
#include <stdlib.h>
#include <string.h>
#include <sys/shm.h>
#include <sys/wait.h>

int main() {
    int choice = 1;
    char input[20];
    key_t key = ftok("shmfile", 65);
    int segment_id = shmget(key, 4096, 0666 | IPC_CREAT);
    char* shared_memory = (char*)shmat(segment_id, NULL, 0);
```



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```
while (choice == 1) {  
    printf("Shared memory data: %s\n", shared_memory);  
    printf("Enter the state: \n");  
    scanf("%s", input);  
    sprintf(shared_memory, input);  
    printf("Press 1 to continue: \n");  
    scanf("%d", &choice);  
}  
shmdt(shared_memory);  
return 0;  
}
```

Process 2

```
#include <error.h>  
#include <fcntl.h>  
#include <semaphore.h>  
#include <stdio.h>  
#include <stdlib.h>  
#include <string.h>  
#include <sys/shm.h>  
#include <sys/wait.h>  
  
int main() {  
    int choice = 1;  
    char input[20];
```



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    printf("Enter the state: \n");
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    printf("Press 1 to continue: \n");
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shmdt(shared_memory);
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Output:

```
amal@ubuntu ~/Documents/Labs/OS_LAB/Expt6 main ± ./proc1
Shared memory data: thane
Enter the state:
Maharashtra
Press 1 to continue:
1
Shared memory data: Thane
Enter the state:
```

```
✗ amal@ubuntu ~/Documents/Labs/OS_LAB/Expt6 main ± ./proc2
Shared memory data: Maharashtra
Enter the district:
Thane
Press 1 to continue:
```

```
✗ amal@ubuntu ~/Documents/Labs/OS_LAB/Expt6 main ± ./proc2
Shared memory data: Maharashtra
Enter the district:
Thane
Press 1 to continue:
```

```
✗ amal@ubuntu ~/Documents/Labs/OS_LAB/Expt6 main ± ./proc2
Shared memory data: Maharashtra
Enter the district:
Thane
Press 1 to continue:
```