LAB #12

SOURCE CODE:

```c
#include<sys/types.h>
#include<sys/ipc.h>
#include<stdio.h>
#include <sys/sem.h>
void main()
{
int semid,key,nsem;
key=(key_t) 0*20;
nsem=0;
semid=semget(key,nsem,IPC_CREAT|0666);
printf("Created semaphore with ID :%d\n",semid);
}
```

OUTPUT:

```
opr@opr-VirtualBox:~$ gcc lab12a.c
opr@opr-VirtualBox:~$ ./a.out
Created semaphore with ID :-1
opr@opr-VirtualBox:~$
```

SOURCE CODE:

```c
#include<sys/types.h>
#include<sys/ipc.h>
#include<stdio.h>
#include <sys/sem.h>
void main()
{
int semid,key,flag,nsem;
key=(key_t) 0*20;
flag=IPC_CREAT |0666;
nsem=1;
semid=semget(key,nsem,flag);
printf("Craeted semaphore with id : %d\n",semid);
}
```

OUTPUT:

```
opr@opr-VirtualBox:~$ gcc lab12b.c
opr@opr-VirtualBox:~$ ./a.out
Craeted semaphore with_id : 32769
opr@opr-VirtualBox:~$
```

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LAB #12

SOURCE CODE:

```c
#include <sys/types.h>
#include<sys/ipc.h>
#include<sys/sem.h>
#include<errno.h>
#include<stdio.h>
#include <unistd.h>
void main( )
{
int semid,retval;
semid=semget(0*20,1,0666 | IPC_CREAT);
retval = semctl(semid,0,GETPID,0);
printf("PID returned by semctl is %d and actual PID is %d\n", retval,getpid( ));
}
```

OUTPUT:

```
opr@opr-VirtualBox:~$ gcc lab12c.c
opr@opr-VirtualBox:~$ ./a.out
PID returned by semctl is 0 and actual PID is 3200
opr@opr-VirtualBox:~$
```

SOURCE CODE:

```c
#include<stdio.h>
#include<unistd.h>
#include<sys/types.h>
#include<sys/ipc.h>
#include<sys/sem.h>
#include<errno.h>
void main( )
{
int semid,retval;
semid=semget(0*20,1,0666| IPC_CREAT);
retval=semctl(semid,0,GETPID,0);
printf("PID returned by semctl is %d and actual PID is %d\n",retval,getpid( ));
retval=semctl(semid,0,SETVAL,1);
printf("PID returned by semctl is %d and set value is %d\n",retval,SETVAL);
}
```

OUTPUT:

```
opr@opr-VirtualBox:~$ gcc lab12d.c
opr@opr-VirtualBox:~$ ./a.out
PID returned by semctl is 0 and actual PID is 3222
PID returned by semctl is 0 and set value is 16
opr@opr-VirtualBox:~$
```

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