

8. Illustrate the concept of multithreading using a C program.

```
7 ipc.cpp
1  #include <stdio.h>
2  #include <stdlib.h>
3  #include <unistd.h>
4  #include <pthread.h>
5  int g = 0;
6  void *myThreadFun(void *vargp)
7  {
8
9      int *myid = (int *)vargp;
10
11      // Let us create a static variable to observe its changes
12      static int s = 0;
13
14      // Change static and global variables
15      ++s; ++g;
16
17      // Print the argument, static and global variables
18      printf("Thread ID: %d, Static: %d, Global: %d\n", *myid, ++s, ++g);
19  }
20
21  int main()
22  {
23      int i;
24      pthread_t tid;
25
26      // Let us create three threads
27      for (i = 0; i < 3; i++)
28          pthread_create(&tid, NULL, myThreadFun, (void *)&tid);
29
30      pthread_exit(NULL);
31      return 0;
32  }
```

```
C:\Users\kalya\OneDrive\Desktop\7 ipc.exe
Thread ID: 3, Static: 2, Global: 2
Thread ID: 3, Static: 4, Global: 4

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Process exited after 0.4408 seconds with return value 3221225477
Press any key to continue . . .
```