SOS Assignment 1 – Task 2

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```
#include <sys/ipc.h>
#include <sys/shm.h>
```

Figure 1

A shared memory allows to communicate to two processes or more processes. The advantage is the use of shared memory, less CPU time. So, we can say CPU is faster. We use <sys/ipc.h> and <sys/shm.h> when creating a shared memory [Figure 1].

```
#define SHMSIZE 1024

int itemKey = 6969;
int shareKey = 8800;
```

Figure 2

1KB memory segment is used to store data. itemKey is a counter for the number of cases that exists in the shared memory and it is a fixed memory. shareKey is the initial key value which records start [Figure 2].

```
jkey = shareKey;   //Passing the initializer key to temp var
count = atoi(getSharedMemory(itemKey));   //Getting the curr
jkey = count + jkey;
count++;
```

Figure 3

getSharedMemory() returns content's key value passed in as the parameter. So, getShareMemory(itemKey) should return 2 [Figure 3].

```
void listAll()
{
        int item_count = atoi(getSharedMemory(itemKey));

  printf("Case ID   | Name of the Study\n");

        for(int i=shareKey;i<(shareKey+item_count);i++)
        {
                if (validateSharedMemory(i)==0){
      continue;
    }

        char *data = getSharedMemory(i);
        char *tag = getTitle(data);

        printf("%i         | %s\n", i, tag);
        }
}
```

Figure 4

With the for loop the program prints the key values and the titles of each memory segment starting from the initial key value until the last possible key value. The if condition in the middle is used for the program to continue in case of a deleted key value is met [Figure 4].

References

https://www.youtube.com/playlist?list=PL-suslzEBiMrqFeagWE9MMWR9ZiYgWq89

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