**Message Queue**:

We had shared memorym But do we need message queue,

> Message received in a process will not be available for other process.

> if all process does not need a shared memory but only a few need it, then it is better to go with message queue.

> Order of message queue is FIFO.

**To Create message queue:**

*#include<sys/types.h>*

*#include<sys/ipc.h>*

*#include<sys/msg.h>*

*int* ***msgget****(key\_t* ***key****, int* ***msgflg****)*

Here,

**key** recognizes the message queue.

**msgflg**  specifies the message queue flag such as IPC\_CREAT or IPC\_EXCL, Need to pass permission as well.

**Return value**

on success: It return identifier

on failure: It return -1

**To send:**

*#include<sys/types.h>*

*#include<sys/ipc.h>*

*#include<sys/msg.h>*

*int* ***msgsnd****(int* ***msgid****, const void \*****msgp****, size\_t* ***msgsz****, int* ***msgflg****)*

Here,

**msgid:** It’s the return value of msgget, identifier.

**msgp:** Pointer to the message

**msgsz:** Size of the message

**msgflg:** indicate certain flag such as IPC\_NOWAIT or MSG\_NOERROR

**return value:**

On success: return 0

On failure: return -1

**To Receive:**

*#include<sys/types.h>*

*#include<sys/ipc.h>*

*#include<sys/msg.h>*

*int* ***msgrcv****(int* ***msgid****, const void \*****msgp****, size\_t* ***msgsz****, long* ***msgtype****, int* ***msgflg****)*

Here,

**msgid:** It is the message queue identifier.

**msgp:** It is the pointer to the message received.

**msgsz:** size of the message received

**msgtype:** indicated the types of the message.

**msgflg:** indicated certain flag such as IPC\_NOWAIT, MSG\_NOERROR

**return value:**

On success: returns the number of bytes received

On failure: returns -1

**To control:**

This system call controls the message queue.

*#include<sys/types.h>*

*#include<sys/ipc.h>*

*#include<sys/msg.h>*

*int* ***msgctl****(int* ***msgid****, int* ***cmd****, struct msqid\_ds* ***\*buf****)*

Here,

**msgid:** It is the message queue identifier.

**cmd:** Command to control the operation of the message queue.

**buf:** It is the pointer to the message queue structure. The value of the structure will be set as per the command.