

My Project

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Chapter 1

Class Index

1.1 Class List

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Chapter 2

File Index

2.1 File List

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global1.h	Contains all the structs, classes and global variables used all over the simulation	25
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Chapter 3

Class Documentation

3.1 course Struct Reference

Public Attributes

- float **freq**
- char **name** [20]
- int **number_of_sems_floated**
- char **deps** [20]
- char **unis** [100]
- [dept](#) * **dep**
- vector< [student](#) * > **course_stud**
- bool **floated**
- [faculty](#) * **instructor**

The documentation for this struct was generated from the following file:

- [global1.h](#)

3.2 dept Struct Reference

Public Attributes

- char **name** [10]
- float **numfac**
- float **studperyr**
- float **semdeptcourse**
- float **semnondeptcourses**
- vector< [course](#) * > **depcourses**
- vector< [course](#) * > **nondepcourses**

- vector< [faculty](#) * > **fac**
- vector< [student](#) * > **dep_stud**
- map< [interest](#) *, float > **interests**

The documentation for this struct was generated from the following file:

- [global1.h](#)

3.3 facnode Struct Reference

This structure stores data of Faculty.

```
#include <analyser.h>
```

Public Attributes

- string [name](#)
- string [surname](#)
- string [entryno](#)
- string [hostel](#)
- string [dept](#)
- string [univ](#)
- int **roomNo**
- vector< string > [interests](#)
- vector< string > [courses](#)

3.3.1 Detailed Description

This structure stores data of Faculty.

3.3.2 Member Data Documentation

3.3.2.1 facnode::courses

Member 'courses' contains courses of the Faculty currently he/she is taking

3.3.2.2 facnode::dept

Member 'dept' contains Department of the Faculty

3.3.2.3 facnode::entryno

Member 'entryno' contains entry no(id) of the Faculty

3.3.2.4 facnode::hostel

Member 'hostel' contains house assigned to the Faculty.

3.3.2.5 facnode::interests

Member 'interests' contains the interests of the Faculty

3.3.2.6 facnode::name

Member 'name' contains name of Faculty

3.3.2.7 facnode::surname

Member 'surname' contains surname of Faculty.

3.3.2.8 facnode::univ

Member 'univ' contains University of of the Faculty

The documentation for this struct was generated from the following file:

- [analyser.h](#)

3.4 faculty Struct Reference

Public Attributes

- int **employee_code**
- char * **name**
- char * **surname**
- [dept](#) * **department**
- [UNIV](#) * **uni**
- [houses](#) * **house**
- int **plotno**
- vector< [interest](#) * > **intrst**
- map< string, float > **set_of_interests**
- vector< [course](#) * > **courses_taken**

The documentation for this struct was generated from the following file:

- [global1.h](#)

3.5 graph Class Reference

A graph class.

```
#include <global1.h>
```

Public Member Functions

- [graph](#) (int i)
A constructor.
- [~graph](#) ()
A constructor.
- void [create_edge](#) (student *v1, student *v2)
A normal member taking two arguments and returning a void value.
- void [del_edge](#) (student *v1, student *v2)
A normal member taking two arguments and returning a void value.
- int [no_of_friends](#) (student *v1)
A normal member taking one argument and returning an int value.
- int * [list_of_friends](#) (student *v2)
A normal member taking one argument and returning an int array.
- bool [already_friends](#) (student *v1, student *v2)
A normal member taking two arguments and returning a bool value.

Public Attributes

- int [numvertices](#)
number of vertices variable.
- int [numedges](#)
number of edges variable.
- bool ** [graphmatrix](#)

3.5.1 Detailed Description

A graph class.

class description.

3.5.2 Member Function Documentation

3.5.2.1 bool graph::already_friends (student * v1, student * v2)

A normal member taking two arguments and returning a bool value.

Parameters

<i>v1</i>	a student.
<i>v2</i>	a student. Checks whether the two people are already friends or not.

Returns

void

3.5.2.2 void graph::create_edge (student * *v1*, student * *v2*)

A normal member taking two arguments and returning a void value.

Parameters

<i>v1</i>	first student.
<i>v2</i>	second student. Adds student 1 to friendlist of 2 and vice-versa

Returns

void

3.5.2.3 void graph::del_edge (student * *v1*, student * *v2*)

A normal member taking two arguments and returning a void value.

Parameters

<i>v1</i>	first student.
<i>v2</i>	second student. Removes student <i>v1</i> to friendlist of <i>v2</i> and vice-versa

Returns

void

3.5.2.4 int* graph::list_of_friends (student * *v2*)

A normal member taking one argument and returning an int array.

Parameters

<i>v1</i>	a student. Gives all the friends of student <i>v1</i>
-----------	---

Returns

void

3.5.2.5 int graph::no_of_friends (student * v1)

A normal member taking one argument and returning an int value.

Parameters

v1	a student. Gives no. of friends of student v1
-----------	---

Returns

void

3.5.3 Member Data Documentation**3.5.3.1 int graph::numedges**

number of edges variable.

gives estimate of no. of friends

3.5.3.2 int graph::numvertices

number of vertices variable.

would be same as no. of students

The documentation for this class was generated from the following files:

- [global1.h](#)
- [graph.cpp](#)
- [main.cpp](#)

3.6 hostels Struct Reference

This structure stores all the hostels.

```
#include <global1.h>
```

Public Attributes

- char [name](#) [30]
- int [we](#) [4]
- vector< [student](#) * > [hostel_stud](#)

3.6.1 Detailed Description

This structure stores all the hostels.

3.6.2 Member Data Documentation

3.6.2.1 hostels::hostel_stud

Member 'hostel_stud' contains list of students living in that hostel.

3.6.2.2 hostels::name

Member 'name' contains name of hostel.

3.6.2.3 hostels::we

Member 'we' denotes floor.

The documentation for this struct was generated from the following file:

- [global1.h](#)

3.7 houses Struct Reference

This structure stores all the faculty houses.

```
#include <global1.h>
```

Public Attributes

- char [name](#) [30]
- int [fill](#)
- vector< [faculty](#) * > [house_fac](#)

3.7.1 Detailed Description

This structure stores all the faculty houses.

3.7.2 Member Data Documentation

3.7.2.1 houses::fill

Member 'fill' denotes no. of faculty in this house locality.

3.7.2.2 houses::house_fac

Member 'house_fac' contains list of faculty with that house locality.

3.7.2.3 houses::name

Member 'name' contains name of house

The documentation for this struct was generated from the following file:

- [global1.h](#)

3.8 interest Struct Reference

This structure stores all the intersets.

```
#include <global1.h>
```

Public Attributes

- char [name](#) [90]
- vector< [student](#) * > [interest_stud](#)
- vector< [faculty](#) * > [interest_fac](#)

3.8.1 Detailed Description

This structure stores all the intersets.

3.8.2 Member Data Documentation

3.8.2.1 interest::interest_fac

Member 'interest_fac' contains list of faculty with that interest.

3.8.2.2 interest::interest_stud

Member 'interest_stud' contains list of students with that interest.

3.8.2.3 interest::name

Member 'name' contains name of interest

The documentation for this struct was generated from the following file:

- [global1.h](#)

3.9 mymsgbuf Struct Reference

This structure stores messgae struct for message queue.

```
#include <message_temp.h>
```

Public Attributes

- long **mttype**
- int **thdid**
- int **waketime**

3.9.1 Detailed Description

This structure stores messgae struct for message queue.

The documentation for this struct was generated from the following file:

- [message_temp.h](#)

3.10 pq_operand Class Reference

```
#include <TimeKeeper.h>
```

Public Member Functions

- bool [operator\(\)](#) (pair< int, int > &n1, pair< int, int > &n2)
Comparater taking two pair of ints and returning a bool value.

3.10.1 Detailed Description

A comparator class for prioirty queue to schedule tasks

3.10.2 Member Function Documentation

3.10.2.1 bool pq_operand::operator() (pair< int, int > & *n1*, pair< int, int > & *n2*)
[inline]

Comparater taking two pair of ints and returning a bool value.

Parameters

<i>n1</i>	: A pointer to pair of integers
<i>n2</i> ,	A pointer to pair of integers

Returns

Bool

The documentation for this class was generated from the following file:

- TimeKeeper.h

3.11 student Struct Reference

Public Attributes

- int **Entry_No**
- int **Year**
- int **Batch**
- char * **name**
- char * **surname**
- [dept](#) * **dep**
- [UNIV](#) * **uni**
- [hostels](#) * **host**
- string **floor**
- int **room_no**
- unsigned long **location_in_allstudents**
- vector< [interest](#) * > **intrst**
- vector< [course](#) * > **sem_dep_courses_taken**
- vector< [course](#) * > **sem_non_dep_courses_taken**
- vector< [student](#) * > **friends**

The documentation for this struct was generated from the following file:

- [global1.h](#)

3.12 studnode Struct Reference

This structure stores data of students.

```
#include <analyser.h>
```

Public Attributes

- string [name](#)
- string [surname](#)
- string [hostel](#)
- string [dept](#)
- string [univ](#)

- int `batch`
- int `year`
- int `roomNo`
- int `entryno`
- char `floor`
- vector< string > **`interests`**
- vector< string > `courses`
- vector< int > `friends`

3.12.1 Detailed Description

This structure stores data of students.

3.12.2 Member Data Documentation

3.12.2.1 `studnode::batch`

Member 'batch' contains batch of the student

3.12.2.2 `studnode::courses`

Member 'courses' contains courses of the student currently he/she is pursuing

3.12.2.3 `studnode::dept`

Member 'dept' contains Department of the student

3.12.2.4 `studnode::entryno`

Member 'entryno' contains entry no of the student

3.12.2.5 `studnode::floor`

Member 'floor' contains entry no of the student

3.12.2.6 `studnode::friends`

Member 'firends' contains friend list of the student

3.12.2.7 `studnode::hostel`

Member 'hostel' contains hostel assigned to the student.

3.12.2.8 studnode::name

Member 'name' contains name of Student

3.12.2.9 studnode::roomNo

Member 'roomNo' contains room no. in the hostel

3.12.2.10 studnode::surname

Member 'surname' contains surname of student.

3.12.2.11 studnode::univ

Member 'univ' contains University of the student

3.12.2.12 studnode::year

Member 'year' contains the year of degree the student is pursuing

The documentation for this struct was generated from the following file:

- [analyser.h](#)

3.13 UNIV Struct Reference

Public Attributes

- char **name** [100]
- vector< string > **hostel**
- map< string, [hostels](#) > **hostel_struct**
- vector< string > **houselocality**
- map< string, [houses](#) > **house_struct**
- float **friendshiprate**
- float **open**
- float **friendliness**
- map< string, [dept](#) > **depts**
- vector< [course](#) * > **allcourses**
- map< string, float > **interest1**

The documentation for this struct was generated from the following file:

- [global1.h](#)

Chapter 4

File Documentation

4.1 analyser.h File Reference

A Documented file. Details.

```
#include <string> #include <limits> #include <vector>×  
#include <iostream> #include <fstream> #include <stdio.-  
h> #include <stdlib.h> #include <string.h> #include <map>×
```

Classes

- struct [studnode](#)
This structure stores data of students.
- struct [facnode](#)
This structure stores data of Faculty.

Functions

- int **shortpath** (int id1, int id2)
- int **floyd** ()
- void **shortest_path** (int i, int j)
- void **list_short_path** (int i, int j)
- int **importance** (int i)
- void **moreimp** (int i)
- void **largestshortestpath** ()
- bool **checkfriends** (int i, int j)
- void **clique** (int i)

4.1.1 Detailed Description

A Documented file. Details.

4.2 genCourse.h File Reference

Generates courses and allocates students to these courses.

```
#include "main_2.h"
```

Functions

- void [floatCourses](#) (int course_random)
A function taking one arguments and returning void. It floats all courses in a given semester.
- void [allocateCourses](#) (int course_random)
A function taking one arguments and returning void. It allocates floated all courses in a given semester.

4.2.1 Detailed Description

Generates courses and allocates students to these courses.

4.2.2 Function Documentation

4.2.2.1 void [allocateCourses](#) (int *course_random*)

A function taking one arguments and returning void. It allocates floated all courses in a given semester.

Parameters

<i>course_ - random</i>	Random Seed Integer
-------------------------	---------------------

Returns

Void

4.2.2.2 void [floatCourses](#) (int *course_random*)

A function taking one arguments and returning void. It floats all courses in a given semester.

Parameters

<i>course_ - random</i>	Random Seed Integer
-----------------------------	---------------------

Returns

Void

4.3 generator.h File Reference

A Documented file. Details.

```
#include <pthread.h> #include <unistd.h> #include <iostream> ×
#include <sys/types.h> #include <errno.h> #include <stdio.-
h> #include <sys/wait.h> #include <sys/stat.h> #include
<fcntl.h> #include <string.h> #include <typeinfo> #include
<utility> #include <sys/mman.h> #include "graphml.h" ×
#include <queue> #include <vector> #include "genFriend.-
h" #include "main_2.h" #include "message_temp.h" #include
"genstudent.h" #include "genCourse.h" #include <stdlib.-
h> #include <map> #include "genfac.h" #include "Semaphore.-
h"
```

Functions

- void * [generateFaculty](#) (void *args)
*A function taking one arguments and returning void *.*
- void * [generateStudents](#) (void *args)
*A function taking one arguments and returning void *.*
- void * [generateCourses](#) (void *args)
*A function taking one arguments and returning void *.*
- void * [genFen](#) (void *args)
*A function taking one arguments and returning void *.*
- void * [readpp](#) (void *args)
*A function taking one arguments and returning void *.*

4.3.1 Detailed Description

A Documented file. Details.

4.3.2 Function Documentation

4.3.2.1 void* generateCourses (void * args)

A function taking one arguments and returning void *.

It calls the generate courses function and sends alarm request to timekeeper

Parameters

<i>args</i>	given due to pthread_create.
-------------	------------------------------

Returns

void * due to pthread.

4.3.2.2 void* generateFaculty (void * args)

A function taking one arguments and returning void *.

It calls the generate faculty function and sends alarm request to timekeeper

Parameters

<i>args</i>	given due to pthread_create.
-------------	------------------------------

Returns

void * due to pthread.

4.3.2.3 void* generateStudents (void * args)

A function taking one arguments and returning void *.

It calls the generate Students function and sends alarm request to timekeeper

Parameters

<i>args</i>	given due to pthread_create.
-------------	------------------------------

Returns

void * due to pthread.

4.3.2.4 void* genFen (void * args)

A function taking one arguments and returning void *.

It calls the generate friends function and sends alarm request to timekeeper

Parameters

<i>args</i>	given due to pthread_create.
-------------	------------------------------

Returns

void * due to pthread.

4.3.2.5 void* readpp (void * args)

A function taking one arguments and returning void *.

It recieves message from timekeeper and signals the thread

Parameters

<i>args</i>	it takes parameter simulation run time.
-------------	---

Returns

void * due to pthread.

4.4 genfac.h File Reference

Generates faculty nodes and assigns random interest to them Details.

```
#include "global1.h" #include "main_2.h"
```

Functions

- void [randominterest_fac](#) (faculty *fc, dept *department)
A function taking two arguments and returning void. It assigns random interests to a faculty from the interests of his department.
- void [genfacof1dept](#) (struct [UNIV](#) *univer, struct [dept](#) *depart, int seed)
A function taking three arguments and returning void. Generates faculty nodes.

4.4.1 Detailed Description

Generates faculty nodes and assigns random interest to them Details.

4.4.2 Function Documentation**4.4.2.1 void genfacof1dept (struct UNIV * univer, struct dept * depart, int seed)**

A function taking three arguments and returning void. Generates faculty nodes.

Parameters

<i>seed</i>	Random Seed Integer
<i>depart</i>	Department for which faculty are generated
<i>univ</i>	University for which faculty are generated

Returns

Void

4.4.2.2 void randominterest_fac (faculty * fc, dept * department)

A function taking two arguments and returning void. It assigns random interests to a faculty from the interests of his department.

Parameters

<i>fc</i>	Faculty node
<i>department</i>	Department of the faculty

Returns

Void

4.5 genFriend.h File Reference

Generates friends - abides by all the probability clauses. Uses re-entrant random class from C++11 for random no. generation.

```
#include <math.h> #include <string.h>
```

Functions

- int [genFriends](#) (void *args)

A function taking one arguments and returning an integer value.

4.5.1 Detailed Description

Generates friends - abides by all the probability clauses. Uses re-entrant random class from C++11 for random no. generation.

4.5.2 Function Documentation**4.5.2.1 int genFriends (void * args)**

A function taking one arguments and returning an integer value.

Parameters

<i>t</i>	Used to calculate next time for genfriends function call .
----------	--

Returns

wake up time (which is sent to timekeeper)

4.6 genstudent.h File Reference

Generates student nodes and assigns random interest to them. Delete students after 4 years.

```
#include "global1.h" #include "main_2.h" #include <cstdlib> ×  
#include <iostream> #include <string> #include <stdio.-  
h> #include <stdlib.h> #include <map> #include <utility> ×  
#include <vector> #include <time.h> #include <algorithm> ×
```

Functions

- void [randominterest_st](#) ([student](#) *st, [dept](#) *department)
A function taking two arguments and returning void. It assigns random interests to a student.
- void [genstuof1dept](#) (float stupy, struct [UNIV](#) *univer, struct [dept](#) *depart, int seed, int batch)
A function taking five arguments and returning void. It generates student nodes.
- void [increase_year](#) ()
A function taking zero arguments and returning void. It increase the current year by one.
- void [kill](#) ()
A function taking zero arguments and returning void. It kill the students after every four year.
- void [kill_all](#) ()
A function taking zero arguments and returning void. It is called for cleanup at the end.

4.6.1 Detailed Description

Generates student nodes and assigns random interest to them. Delete students after 4 years.

4.6.2 Function Documentation

4.6.2.1 void [genstuof1dept](#) (float *stupy*, struct [UNIV](#) * *univer*, struct [dept](#) * *depart*, int *seed*, int *batch*)

A function taking five arguments and returning void. It generates student nodes.

Parameters

<i>univer</i>	University of the student
<i>depart</i>	Department of the student
<i>seed</i>	Student random seed
<i>batch</i>	Current entry year for which students are being created
<i>stupy</i>	Student per year that need to be generated

Returns

Void

4.6.2.2 void increase_year ()

A function taking zero arguments and returning void. It increase the current year by one.

Returns

Void

4.6.2.3 void kill ()

A function taking zero arguments and returning void. It kill the students after every four year.

Returns

Void

4.6.2.4 void kill_all ()

A function taking zero arguments and returning void. It is called for cleanup at the end.

Returns

Void

4.6.2.5 void randominterest_st (student * st, dept * department)

A function taking two arguments and returning void. It assigns random interests to a student.

Parameters

<i>st</i>	Student node
<i>department</i>	Department of the student

Returns

Void

4.7 global1.h File Reference

Contains all the structs, classes and global variables used all over the simulation.

```
#include <pthread.h> #include <unistd.h> #include <iostream> ×
#include <string> #include <stdio.h> #include <sys/types.-
h> #include <stdlib.h> #include <map> #include <utility> ×
#include <vector> #include "Semaphore.h" #include <cstdlib> ×
#include <time.h> #include <algorithm>
```

Classes

- struct [interest](#)
This structure stores all the intersets.
- struct [hostels](#)
This structure stores all the hostels.
- struct [houses](#)
This structure stores all the faculty houses.
- struct [course](#)
- struct [student](#)
- struct [faculty](#)
- struct [dept](#)
- struct [UNIV](#)
- class [graph](#)
A graph class.

Variables

- vector< string > [stud_name](#)
Vector containing names and surnames of students .
- vector< string > [stud_surname](#)
- pthread_mutex_t [facMutex](#)
Mutexes .
- pthread_mutex_t [StudMutex](#)
- pthread_mutex_t [CourseMutex](#)
- pthread_mutex_t [FriendMutex](#)
- pthread_mutex_t [courseaffac](#)
- pthread_mutex_t [courseafStud](#)
- pthread_mutex_t [friAfAll](#)
- pthread_cond_t [facCond](#)
Conditional variables .

- pthread_cond_t **StudCond**
- pthread_cond_t **CourseCond**
- pthread_cond_t **FriendCond**
- pthread_cond_t **condcoraffac**
- pthread_cond_t **condcorafStud**
- pthread_cond_t **friAf**
- int **facRANDOM**
Random seed for faculty, student, course and friend .
- int **studRANDOM**
- int **courseRANDOM**
- int **friendRANDOM**
- int **p**
- int **runThdStud**
Vector containing names and surnames of students .
- int **runThdCourse**
- int **runThdFriend**
- int **alloafgen**
- int **runThdfac**
- int **alloafStud**
- key_t **gentotime**
Vector containing names and surnames of students .
- key_t **timetogen**
- int **entryno**
Id's of students and faculty .
- int **facultyid**
- int **numberofsems**
- vector< string > **prof_name**
Vector containing names and surnames of faculty .
- vector< string > **prof_surname**
- vector< **UNIV** > **universities**
Vector containing all the university nodes .
- vector< **faculty** * > **allfaculty**
Vector containing all the faculty nodes.
- vector< **student** * > **allstudents**
Vector containing all the student nodes.
- map< string, **interest** * > **allinterest**
Vector containing all the interest.
- **graph** * **g**

4.7.1 Detailed Description

Contains all the structs, classes and global variables used all over the simulation.

4.7.2 Variable Documentation

4.7.2.1 `map<string,interest*> allinterest`

Vector containing all the interest.

Interests are globbal across universities.

4.7.2.2 `vector<student*> allstudents`

Vector containing all the student nodes.

This vector gets updated after every kill and generate.

4.7.2.3 `int entryno`

Id's of students and faculty .

Both faculty and students are given their Id's sequentially

4.7.2.4 `pthread_cond_t facCond`

Conditional variables .

For pausing threads

4.7.2.5 `pthread_mutex_t facMutex`

Mutexes .

To lock various symbols

4.7.2.6 `int facRANDOM`

Random seed for faculty,student,course and friend .

Same as the ones in input file.

4.7.2.7 `key_t gentotime`

Vector containing names and surnames of students .

Used in random assignment of names to students

4.7.2.8 `vector<string> prof_name`

Vector containing names and surnames of faculty .

Used in random assignment of names to faculty.

4.7.2.9 `int runThdStud`

Vector containing names and surnames of students .

Used in random assignment of names to students

4.7.2.10 `vector< string > stud_name`

Vector containing names and surnames of students .

Used in random assignment of names to students

4.8 `graphml.h` File Reference

Generates the graph.graphml file Called after the simulation run is complete.

Functions

- void `graphconverter` ()

A function taking zero arguments and returning void. It processes on available data and generates the graphml file .

4.8.1 Detailed Description

Generates the graph.graphml file Called after the simulation run is complete.

4.8.2 Function Documentation

4.8.2.1 `void graphconverter ()`

A function taking zero arguments and returning void. It processes on available data and generates the graphml file .

Returns

Void

4.9 `main_2.h` File Reference

File Parser.

```
#include <iostream> #include <string.h> #include <stdio.-  
h> #include <stdlib.h> #include <map> #include <vector> ×  
#include <time.h>
```

Functions

- int [setEnviro](#) ()

A function taking no arguments and returning an integer value.

4.9.1 Detailed Description

File Parser.

4.9.2 Function Documentation

4.9.2.1 int [setEnviro](#) ()

A function taking no arguments and returning an integer value.

This function parses the input file and stores all the data.

Returns

return value as such of no further use

4.10 message_temp.h File Reference

A Documented file. Details.

```
#include <pthread.h> #include <sys/wait.h> #include <sys/types.-  
h> #include <unistd.h> #include <sys/ipc.h> #include  
<sys/msg.h> #include <string.h> #include <iostream> ×  
#include <stdio.h> #include <stdlib.h>
```

Classes

- struct [mymsgbuf](#)

This structure stores messgae struct for message queue.

Functions

- int [open_queue](#) (key_t t)

A function taking one arguments and returning an integer value.

- int [send_msg](#) (int t, struct [mymsgbuf](#) *s)

A function taking two arguments and returning an integer value.

- int `rec_msg` (int, struct `mymsgbuf` *, long)

A function taking two arguments and returning an integer value.

4.10.1 Detailed Description

A Documented file. Details.

4.10.2 Function Documentation

4.10.2.1 int `open_queue` (key.t t)

A function taking one arguments and returning an integer value.

Parameters

<code>t</code>	Used as a key for message queue.
----------------	----------------------------------

Returns

id of the message queue.

4.10.2.2 int `rec_msg` (int , struct `mymsgbuf` * , long)

A function taking two arguments and returning an integer value.

Parameters

<code>t</code>	queue id to identify the message queue
<code>s</code>	struct pointer in which message is to recieved

Returns

integer

4.10.2.3 int `send_msg` (int t, struct `mymsgbuf` * s)

A function taking two arguments and returning an integer value.

Parameters

<code>t</code>	queue id to identify the message queue
<code>s</code>	struct pointer which has to be sent over queue

Returns

1 if message sending is successful

4.11 Semaphore.h File Reference

A Documented file. Details.

```
#include <stdio.h> #include <stdlib.h> #include <unistd.-  
h> #include <errno.h> #include <sys/types.h> #include  
<sys/ipc.h> #include <sys/sem.h>
```

Functions

- int [open_sem](#) (key_t t, int s)
A function taking two arguments and returning an integer value.
- void [getSem](#) (int a)
A function taking one argument and having void return type.
- void [relSem](#) (int d)
A function taking one argument and having void return type.

4.11.1 Detailed Description

A Documented file. Details.

4.11.2 Function Documentation

4.11.2.1 void [getSem](#) (int a)

A function taking one argument and having void return type.

Parameters

a	semaphore id acquire lock over the semaphore by decreasing semaphore value.
-------------------	---

Returns

void

4.11.2.2 int [open_sem](#) (key_t t, int s)

A function taking two arguments and returning an integer value.

Parameters

<i>t</i>	Used to generate a semaphore.
<i>s</i>	Number of semaphores in a semaphore array.

Returns

id of the semaphore

4.11.2.3 void relSem (int *d*)

A function taking one argument and having void return type.

Parameters

<i>d</i>	release lock over the semaphore by increasing semaphore value.
----------	--

Returns

void