

My Project

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Chapter 1

Data Structure Index

1.1 Data Structures

Here are the data structures with brief descriptions:

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Chapter 2

File Index

2.1 File List

Here is a list of all files with brief descriptions:

fila1s.c	9
lcgrand.c	12
lcgrand.h	14

Chapter 3

Data Structure Documentation

3.1 variaveis Struct Reference

Data Fields

- int [next_event_type](#)
- int [num_custs_delayed](#)
- int [num_delays_required](#)
- int [num_events](#)
- int [num_in_q](#)
- int [server_status](#)
- float [area_num_in_q](#)
- float [area_server_status](#)
- float [mean_interarrival](#)
- float [mean_service](#)
- float [sim_time](#)
- float [time_arrival](#) [Q_LIMIT+1]
- float [time_last_event](#)
- float [time_next_event](#) [3]
- float [total_of_delays](#)

3.1.1 Field Documentation

3.1.1.1 [area_num_in_q](#)

```
float area_num_in_q
```

3.1.1.2 [area_server_status](#)

```
float area_server_status
```

3.1.1.3 mean_interarrival

```
float mean_interarrival
```

3.1.1.4 mean_service

```
float mean_service
```

3.1.1.5 next_event_type

```
int next_event_type
```

3.1.1.6 num_custs_delayed

```
int num_custs_delayed
```

3.1.1.7 num_delays_required

```
int num_delays_required
```

3.1.1.8 num_events

```
int num_events
```

3.1.1.9 num_in_q

```
int num_in_q
```

3.1.1.10 server_status

```
int server_status
```

3.1.1.11 sim_time

```
float sim_time
```

3.1.1.12 time_arrival

```
float time_arrival[Q_LIMIT+1]
```

3.1.1.13 time_last_event

```
float time_last_event
```

3.1.1.14 time_next_event

```
float time_next_event[3]
```

3.1.1.15 total_of_delays

```
float total_of_delays
```

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

- [fila1s.c](#)

Chapter 4

File Documentation

4.1 fila1s.c File Reference

```
#include <stdio.h>
#include <stdlib.h>
#include <math.h>
#include "lcgrand.h"
```

Data Structures

- struct [variaveis](#)

Macros

- #define [Q_LIMIT](#) 100
- #define [BUSY](#) 1
- #define [IDLE](#) 0

Functions

- void [initialize](#) (float *sim_time, int *server_status, int *num_in_q, float *time_last_event, float *time_next_event, int *num_custs_delayed, float *total_of_delays, float *area_num_in_q, float *area_server_status, float *mean_interarrival)
- void [timing](#) (float *sim_time, float *time_next_event, int *next_event_type, int *num_events, FILE *outfile)
- void [arrive](#) (float *sim_time, int *server_status, int *num_in_q, float *time_last_event, int *num_custs_delayed, float *total_of_delays, float *mean_interarrival, float *mean_service, int *num_delays_required, float *time_arrival, float *time_next_event, FILE *outfile)
- void [depart](#) (float *sim_time, int *server_status, float *mean_service, int *num_in_q, float *time_last_event, int *num_custs_delayed, float *total_of_delays, float time_arrival[], float time_next_event[], float *area_num_in_q, float *area_server_status, FILE *outfile)
- void [report](#) (float *sim_time, int *num_custs_delayed, float *total_of_delays, float *mean_interarrival, FILE *outfile, float *mean_service, int *num_delays_required, float *area_num_in_q, float *area_server_status)
- void [update_time_avg_stats](#) (float *area_num_in_q, float *sim_time, float *time_last_event, float *server_status, int *num_in_q, float *area_server_status)
- float [expon](#) (float mean, int stream)
- int [main](#) ()

4.1.1 Macro Definition Documentation

4.1.1.1 BUSY

```
#define BUSY 1
```

4.1.1.2 IDLE

```
#define IDLE 0
```

4.1.1.3 Q_LIMIT

```
#define Q_LIMIT 100
```

4.1.2 Function Documentation

4.1.2.1 arrive()

```
void arrive (
    float * sim_time,
    int * server_status,
    int * num_in_q,
    float * time_last_event,
    int * num_custs_delayed,
    float * total_of_delays,
    float * mean_interarrival,
    float * mean_service,
    int * num_delays_required,
    float * time_arrival,
    float * time_next_event,
    FILE * outfile )
```

4.1.2.2 depart()

```
void depart (
    float * sim_time,
    int * server_status,
    float * mean_service,
    int * num_in_q,
    float * time_last_event,
    int * num_custs_delayed,
    float * total_of_delays,
    float time_arrival[],
    float time_next_event[],
    float * area_num_in_q,
    float * area_server_status,
    FILE * outfile )
```

4.1.2.3 expon()

```
float expon (
    float mean,
    int stream )
```

4.1.2.4 initialize()

```
void initialize (
    float * sim_time,
    int * server_status,
    int * num_in_q,
    float * time_last_event,
    float * time_next_event,
    int * num_custs_delayed,
    float * total_of_delays,
    float * area_num_in_q,
    float * area_server_status,
    float * mean_interarrival )
```

4.1.2.5 main()

```
int main ( )
```

4.1.2.6 report()

```
void report (
    float * sim_time,
    int * num_custs_delayed,
    float * total_of_delays,
    float * mean_interarrival,
    FILE * outfile,
    float * mean_service,
    int * num_delays_required,
    float * area_num_in_q,
    float * area_server_status )
```

4.1.2.7 timing()

```
void timing (
    float * sim_time,
    float * time_next_event,
    int * next_event_type,
    int * num_events,
    FILE * outfile )
```

4.1.2.8 update_time_avg_stats()

```
void update_time_avg_stats (
    float * area_num_in_q,
    float * sim_time,
    float * time_last_event,
    float * server_status,
    int * num_in_q,
    float * area_server_status )
```

4.2 lcgrand.c File Reference

Macros

- #define [MODLUS](#) 2147483647
- #define [MULT1](#) 24112
- #define [MULT2](#) 26143

Functions

- float [lcgrand](#) (int stream)
- void [lcgrandst](#) (long zset, int stream)
- long [lcgrandgt](#) (int stream)

4.2.1 Macro Definition Documentation

4.2.1.1 MODLUS

```
#define MODLUS 2147483647
```

4.2.1.2 MULT1

```
#define MULT1 24112
```

4.2.1.3 MULT2

```
#define MULT2 26143
```

4.2.2 Function Documentation

4.2.2.1 lcgrand()

```
float lcgrand (  
    int stream )
```

4.2.2.2 lcgrandgt()

```
long lcgrandgt (  
    int stream )
```

4.2.2.3 lcgrandst()

```
void lcgrandst (  
    long zset,  
    int stream )
```

4.3 lcgrand.h File Reference

Functions

- float [lcgrand](#) (int stream)
- void [lcgrandst](#) (long zset, int stream)
- long [lcgrandgt](#) (int stream)

4.3.1 Function Documentation

4.3.1.1 lcgrand()

```
float lcgrand (  
    int stream )
```

4.3.1.2 lcgrandgt()

```
long lcgrandgt (  
    int stream )
```

4.3.1.3 lcgrandst()

```
void lcgrandst (  
    long zset,  
    int stream )
```

4.4 lcgrand.h

[Go to the documentation of this file.](#)

```
1 /* The following 3 declarations are for use of the random-number generator  
2 lcgrand and the associated functions lcgrandst and lcgrandgt for seed  
3 management. This file (named lcgrand.h) should be included in any program  
4 using these functions by executing  
5 #include "lcgrand.h"  
6 before referencing the functions. */  
7 float lcgrand(int stream);  
8 void lcgrandst(long zset, int stream);  
9 long lcgrandgt(int stream);
```

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