My Project

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Chapter 1

Data Structure Index

1.1 Data Structures

Here are the data structures with brief descriptions:

Chapter 2

File Index

2.1 File List

Here is a list of all files with brief descriptions:

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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