FCFS

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Class Index

1.1 Class List

Here are the classes, structs, unions and interfaces 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:

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Chapter 3

Class Documentation

3.1 Process Class Reference

Class to emulate process proprieties.

```
#include <Process.h>
```

Public Member Functions

- Process (const std::string &name, double start_time, double completionTime)
- std::string get_name () const
- void set_name (const std::string &name)
- double get_start_time () const
- void set_start_time (const double start_time)
- double get_completion_t_ime () const
- void set_completion_t_ime (const double completion_t_ime)

Friends

- bool operator< (const Process &lhs, const Process &rhs)
- bool operator<= (const Process &lhs, const Process &rhs)
- bool operator> (const Process &lhs, const Process &rhs)
- std::ostream & operator<< (std::ostream &os, const Process &obj)

3.1.1 Detailed Description

Class to emulate process proprieties.

Class used to emulate process proprieties during FCFS algorithm

3.1.2 Constructor & Destructor Documentation

3.1.2.1 Process()

```
Process::Process (
             const std::string & name,
             double start_time,
             double completionTime )  [inline]
```

3.1.3 Member Function Documentation

3.1.3.1 get_completion_t_ime()

```
double Process::get_completion_t_ime ( ) const
```

3.1.3.2 get_name()

```
std::string Process::get_name ( ) const
```

3.1.3.3 get_start_time()

```
double Process::get_start_time ( ) const
```

3.1.3.4 set_completion_t_ime()

```
void Process::set_completion_t_ime (
             const double completion_t_ime )
```

3.1.3.5 set_name()

```
void Process::set_name (
             const std::string & name )
```

3.1.3.6 set_start_time()

```
void Process::set_start_time (
             const double start_time )
```

3.1.4 Friends And Related Function Documentation

3.1.4.1 operator<

```
bool operator< (
             const Process & lhs,
             const Process & rhs )   [friend]
```

3.1.4.2 operator<<

```
std::ostream & operator<< (
             std::ostream & os,
             const Process & obj )   [friend]
```

3.1.4.3 operator<=

```
bool operator<= (
             const Process & lhs,
             const Process & rhs )   [friend]
```

3.1.4.4 operator>

```
bool operator> (
             const Process & lhs,
             const Process & rhs )   [friend]
```

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

- Process.h
- Process.cpp

Chapter 4

File Documentation

4.1 FCFS.cpp File Reference

```
#include <iostream>
#include <queue>
#include "Process.h"
```

Functions

- void firstComeFirstServed (std::priority_queue< Process > processQueue)

  FCFS algorithm. All results (total execution time, total wait time, total idle time) are printed.
- std::priority_queue< Process > getProcessQueue ()

  Function used to read processes.
- int main ()

  Main function. Calles getProcessQueue and firstComeFirstServed.

4.1.1 Function Documentation

4.1.1.1 firstComeFirstServed()

```
void firstComeFirstServed (
            std::priority_queue< Process > processQueue )
```

FCFS algorithm. All results (total execution time, total wait time, total idle time) are printed.

Parameters

processQueue	min-heap that contains processes

Returns

void

4.1.1.2 getProcessQueue()

```
std::priority_queue< Process > getProcessQueue ( )
```

Function used to read processes.

Returns

processQueue min-heap that contains processes

4.1.1.3 main()

```
int main ( )
```

Main function. Calles getProcessQueue and firstComeFirstServed.

Returns

0

4.2 Process.cpp File Reference

```
#include "Process.h"
```

4.3 Process.h File Reference

```
#include <ostream>
#include <string>
```

Classes

- class Process

  Class to emulate process proprieties.

4.4 Process.h

Go to the documentation of this file.

```
#pragma once
#include <ostream>
#include <string>
class Process
{
public:
    Process(const std::string& name, double start_time, double completionTime)
        : name(name),
          startTime(start_time),
          completionTime(completionTime)
    {
    }

    std::string get_name() const;
    void set_name(const std::string& name);
    double get_start_time() const;
    void set_start_time(const double start_time);

    friend bool operator<(const Process& lhs, const Process& rhs)
    {
        return lhs.startTime > rhs.startTime;
    }

    friend bool operator<=(const Process& lhs, const Process& rhs)
    {
        return !(rhs < lhs);
    }

    friend bool operator>(const Process& lhs, const Process& rhs)
    {
        return rhs < lhs;
    }

    double get_completion_t_ime() const;
    void set_completion_t_ime(const double completion_t_ime);

    friend std::ostream& operator«(std::ostream& os, const Process& obj)
    {
        return os
            « "name: " « obj.name
            « " startTime: " « obj.startTime
            « " completionTime: " « obj.completionTime;
    }

private:
    std::string name;
    double startTime;
    double completionTime;
};
```

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