

My Project

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Chapter 1

Hierarchical Index

1.1 Class Hierarchy

This inheritance list is sorted roughly, but not completely, alphabetically:

flowshop.Blocking	5
flowshop.CreateCSV	6
flowshop.FileRead	7
flowshop.FlowShop	8
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Chapter 2

Class Index

2.1 Class List

Here are the classes, structs, unions and interfaces with brief descriptions:

flowshop.Blocking	5
flowshop.CreateCSV	
CreateCSV class	6
flowshop.FileRead	7
flowshop.FlowShop	8
flowshop.Main	9
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flowshop.Nowait	13

Chapter 3

Class Documentation

3.1 flowshop.Blocking Class Reference

Public Member Functions

- `int [][] block (int [][] a)`

3.1.1 Detailed Description

Author

JuneYeob Lee(2462 9603)

•

This class is for Folow Shop with [Blocking](#)

Date

5/27/2019 !\Contact:Leej @cwu.edu !\Created on: 5/24/2019

3.1.2 Member Function Documentation

3.1.2.1 `block()`

```
int [][] flowshop.Blocking.block (  
    int a[][] )
```

Block method calculate completion time with processing time with Flow Shop [Blocking](#)

Parameters

a	initial processing time with best sequence from NEH .
----------	---

Returns

return to the completion time.

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

- [Blocking.java](#)

3.2 flowshop.CreateCSV Class Reference

[CreateCSV](#) class.

Public Member Functions

- void [CreateCsv1](#) (int[] [] a, int[] b, int[] [] c, String C) throws IOException
- void **CreateCsv2** (long[] [] a, String C) throws IOException

3.2.1 Detailed Description

[CreateCSV](#) class.

Author

JuneYeob Lee(2462 9603)

•

This class is for creating CSV file about results

Date

5/27/2019 \Contact:Leej @cwu.edu \Created on: 3/28/2019

3.2.2 Member Function Documentation

3.2.2.1 CreateCsv1()

```
void flowshop.CreateCSV.CreateCsv1 (
    inta [][],
    int [] b,
    int c[][],
    String C ) throws IOException
```

Create CSV1 method create CSV file of completion time.

Parameters

<i>a</i>	2d array of completion time
<i>b</i>	the best sequence of the jobs.
<i>C</i>	name of the CSV file

Exceptions

<i>IOException</i>	
--------------------	--

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

- CreateCSV.java

3.3 flowshop.FileRead Class Reference

Public Member Functions

- void [read](#) (String x) throws FileNotFoundException, IOException

3.3.1 Detailed Description

Author

JuneYeob Lee(2462 9603)

•

This class is for read txt file and create 2d array of processing time.

Date

5/27/2019 !\Contact:Leej @cwu.edu !\Created on: 5/24/2019

3.3.2 Member Function Documentation

3.3.2.1 read()

```
void flowshop.FileRead.read (  
    String x ) throws FileNotFoundException, IOException
```

Parameters

<i>x</i>	name of the data file
----------	-----------------------

Exceptions

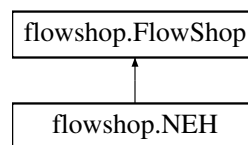
<i>FileNotFoundException</i>	
<i>IOException</i>	

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

- FileRead.java

3.4 flowshop.FlowShop Class Reference

Inheritance diagram for flowshop.FlowShop:

**Public Member Functions**

- int [Completion](#) (int[[]]a)
- int [makespan](#) (int[[]] a)

3.4.1 Detailed Description**Author**

JuneYeob Lee(2462 9603)

•

This class is for Folow Shop Scheduling

Date

5/27/2019 !\Contact:Leej @cwu.edu !\Created on: 5/24/2019

3.4.2 Member Function Documentation**3.4.2.1 Completion()**

```
int [][[]] flowshop.FlowShop.Completion (
    inta [][[]] )
```

Completion method calculate completion time with processing time with Flow shop scheduling.

Parameters

<i>a</i>	initial processing time with best sequence from NEH .
----------	---

Returns

return completion time array

3.4.2.2 makespan()

```
int flowshop.FlowShop.makespan (
    int a[][] )
```

Makesapn method return make span value.

Parameters

<i>a</i>	completion time array
----------	-----------------------

Returns

makespan value

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

- FlowShop.java

3.5 flowshop.Main Class Reference

Static Public Member Functions

- static void [main](#) (String[] args) throws IOException

3.5.1 Detailed Description**Author**

JuneYeob Lee(2462 9603)

•

This class is for main to implement 3 Flow shop scheduling with [NEH](#) algorithm

Date

5/27/2019 !\Contact:Leej @cwu.edu !\Created on: 5/24/2019

3.5.2 Member Function Documentation

3.5.2.1 main()

```
static void flowshop.Main.main (
    String [] args ) throws IOException [static]
```

Main

Parameters

<i>args</i>	the command line arguments
-------------	----------------------------

Exceptions

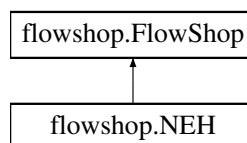
<i>java.io.IOException</i>	
----------------------------	--

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

- Main.java

3.6 flowshop.NEH Class Reference

Inheritance diagram for flowshop.NEH:



Public Member Functions

- int [] [Step1](#) (int[][] a)
- int [] [Step2](#) (int[] a)
- int [] [Step3](#) (int[][] a, int[] sequence)
- int [] [Step4](#) (int[][] a, int[] sequence)
- int [][] [best](#) (int[][] a, int[] bestseq)

3.6.1 Detailed Description

Author

JuneYeob Lee(2462 9603)

- [NEH](#) was published in 1983, and over the past 20 years.

This class is for [NEH](#) algorithm to get optimized sequence of jobs

Date

5/27/2019 \Contact:Leej @cwu.edu \Created on: 5/24/2019

3.6.2 Member Function Documentation

3.6.2.1 best()

```
int [][] flowshop.NEH.best (
    inta [][],
    int [] bestseq )
```

best method is for arrange processing time with best sequence of jobs.

Parameters

<i>a</i>	is initial processing time array
<i>bestseq</i>	The best sequence of jobs

Returns

processing time with best job sequence

3.6.2.2 Step1()

```
int [] flowshop.NEH.Step1 (
    int a[][] )
```

Step1 method calculate total processing time for each machine

Parameters

<i>a</i>	initial processing time from data file.
----------	---

Returns

sums of their total processing times

3.6.2.3 Step2()

```
int [] flowshop.NEH.Step2 (
    int [] a )
```

Step2 arrange in decreasing total processing time

Parameters

<i>a</i>	sums of their total processing time
----------	-------------------------------------

Returns

sequence with arrange first two jobs

3.6.2.4 Step3()

```
int [] flowshop.NEH.Step3 (
    int a[][],
    int [] sequence )
```

Step 3 method arrange first two jobs by shorter makespan.

Parameters

<i>a</i>	initial processing time from file.
<i>sequence</i>	sequence in decreasing time.

Returns

sequence which only arrange first two jobs.

3.6.2.5 Step4()

```
int [] flowshop.NEH.Step4 (
    int a[][],
    int [] sequence )
```

Step 4 method arrange jobs with best sequence

Parameters

<i>a</i>	initial processing time.
<i>sequence</i>	sequence from step 3

Returns

optimized sequence

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

- NEH.java

3.7 flowshop.Nowait Class Reference

Public Member Functions

- `int [][] noWait (int [][] a)`

3.7.1 Member Function Documentation

3.7.1.1 noWait()

```
int [][] flowshop.Nowait.noWait (  
    int a[][] )
```

noWait method calculate completion time with processing time with Flow shop scheduling with No-Wait.

Parameters

<i>a</i>	initial processing time with best sequence from NEH .
----------	---

Returns

return to the completion time.

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

- Nowait.java

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