Arrival_Time.csv

cpu-scheduling-algorithm-master > test > Arrival_time.csv > data

```
process_id,arrival_time,cpu_time1,io_time,cpu_time2,title
1,2,3,5,3,Women in STEM
2,4,3,5,3,Men's Mental Health
3,6,3,5,3,Eco Projects
4,8,3,5,3,Marine Conservation
5,10,3,5,3,Making Bombs
6,12,3,5,3,Making Weapons
7,14,3,5,3,Killing Humans
8,16,3,5,3,How to Murder People
```

FCFS

```
File being executed: test/Arrival_time.csv

================================================================================================================================================
                                                FCFS
================================================================================================================================================
                Title          Response Time    Turnaround Time          Waiting Time             Start Time            End Time
P1              Women in STEM           0               11                      5                       2                     13
P2              Men's Mental Health             9               20                      14                      13                      24
P3              Eco Projects            18              29                      23                      24                      35
P4              Marine Conservation             27              38                      32                      35                      46
P5              Making Bombs            36              47                      41                      46                      57
P6              Making Weapons          45              56                      50                      57                      68
P7              Killing Humans          54              65                      59                      68                      79
P8              How to Murder People            63              74                      68                      79                      90
------------------------------------------------------------------------------------------------------------------------------------------------
Avg                                     31.5            42.5                    36.5

Total Time: 90
Idle Time: 42
Burst Time: 48
Efficiency is 0.53
Throughput is 88.89 per a second
================================================================================================================================================
```

SJF

```
File being executed: test/Arrival_time.csv

================================================================================================================================================
                                                SJF
================================================================================================================================================
                Title          Response Time    Turnaround Time          Waiting Time             Start Time            End Time
P1              Women in STEM           0               11                      5                       2                     13
P2              Men's Mental Health             9               20                      14                      13                      24
P3              Eco Projects            18              29                      23                      24                      35
P4              Marine Conservation             27              38                      32                      35                      46
P5              Making Bombs            36              47                      41                      46                      57
P6              Making Weapons          45              56                      50                      57                      68
P7              Killing Humans          54              65                      59                      68                      79
P8              How to Murder People            63              74                      68                      79                      90
------------------------------------------------------------------------------------------------------------------------------------------------
Avg                                     15.8            21.2                    18.2

Total Time: 90
Idle Time: 42
Burst Time: 48
Efficiency is 0.53
Throughput is 88.89 per a second
================================================================================================================================================
```

RR

```
File being executed: test/Arrival_time.csv

=================================================================================================================================================
                                                RR
=================================================================================================================================================
                  Title          Response Time   Turnaround Time          Waiting Time             Start Time           End Time
P1              Women in STEM           0              11                      5                       2                    28
P2              Men's Mental Health             9              20                      14                      4                    39
P3              Eco Projects            18             29                      23                      6                    44
P4              Marine Conservation             27             38                      32                      8                    47
P5              Making Bombs            36             47                      41                      10                   48
P6              Making Weapons          45             56                      50                      12                   49
P7              Killing Humans          54             65                      59                      14                   50
P8              How to Murder People            63             74                      68                      16                   51
-------------------------------------------------------------------------------------------------------------------------------------------------
Avg                                     10.5           14.2                    12.2

Total Time: 51
Idle Time: 3
Burst Time: 48
Efficiency is 0.94
Throughput is 156.86 per a second
=================================================================================================================================================
```

MLFQ

```
File being executed: test/Arrival_time.csv

=================================================================================================================================================
                                              MLFQ
=================================================================================================================================================
                  Title          Response Time   Turnaround Time          Waiting Time             Start Time           End Time
P1              Women in STEM           0              11                      5                       2                    29
P2              Men's Mental Health             9              20                      14                      5                    32
P3              Eco Projects            18             29                      23                      8                    35
P5              Making Bombs            27             38                      32                      11                   41
P6              Making Weapons          36             47                      41                      14                   44
P8              How to Murder People            45             56                      50                      17                   50
P7              Killing Humans          54             65                      59                      20                   47
P4              Marine Conservation             63             74                      68                      23                   38
-------------------------------------------------------------------------------------------------------------------------------------------------
Avg                                     7.9            10.6                    9.1

Total Time: 50
Idle Time: 2
Burst Time: 48
Efficiency is 0.96
Throughput is 160.00 per a second
=================================================================================================================================================
```

ChatGPT

```
File being executed: test/Arrival_time.csv

ChatGPT Scheduler not yet implemented
=================================================================================================================================================
                                              GPT4S
=================================================================================================================================================
                  Title          Response Time   Turnaround Time          Waiting Time             Start Time           End Time
P1              Women in STEM           0              11                      5                       2                    14
P2              Men's Mental Health             9              20                      14                      7                    24
P6              Making Weapons          18             29                      23                      15                   50
P4              Marine Conservation             27             38                      32                      16                   47
P7              Killing Humans          36             47                      41                      18                   51
P8              How to Murder People            45             56                      50                      19                   57
P5              Making Bombs            54             65                      59                      25                   46
P3              Eco Projects            63             74                      68                      31                   55
-------------------------------------------------------------------------------------------------------------------------------------------------
Avg                                     6.3            8.5                     7.3

Total Time: 57
Idle Time: 9
Burst Time: 48
Efficiency is 0.84
Throughput is 140.35 per a second
=================================================================================================================================================
```

Arrival_timeVer2.csv：

cpu-scheduling-algorithm-master > test > Arrival_timeVer2.csv > data

```csv
process_id,arrival_time,cpu_time1,io_time,cpu_time2,title
1,2,3,5,3,Making Bombs
2,4,3,5,3,Making Weapons
3,6,3,5,3,Killing Humans
4,8,3,5,3,How to Murder People
5,10,3,5,3,Women in STEM
6,12,3,5,3,Men's Mental Health
7,14,3,5,3,Eco Projects
8,16,3,5,3,Marine Conservation
```

FCFS

```
File being executed: test/Arrival_timeVer2.csv

================================================================================================================================================
                                                FCFS
================================================================================================================================================
                  Title          Response Time    Turnaround Time          Waiting Time             Start Time            End Time
P1              Making Bombs            0               11                      5                       2                     13
P2              Making Weapons          9               20                      14                      13                    24
P3              Killing Humans          18              29                      23                      24                    35
P4              How to Murder People            27              38                      32                      35                    46
P5              Women in STEM           36              47                      41                      46                    57
P6              Men's Mental Health             45              56                      50                      57                    68
P7              Eco Projects            54              65                      59                      68                    79
P8              Marine Conservation             63              74                      68                      79                    90
------------------------------------------------------------------------------------------------------------------------------------------------
Avg                                     31.5            42.5                    36.5

Total Time: 90
Idle Time: 42
Burst Time: 48
Efficiency is 0.53
Throughput is 88.89 per a second
================================================================================================================================================
```

SJF

```
File being executed: test/Arrival_timeVer2.csv

================================================================================================================================================
                                                SJF
================================================================================================================================================
                  Title          Response Time    Turnaround Time          Waiting Time             Start Time            End Time
P1              Making Bombs            0               11                      5                       2                     13
P2              Making Weapons          9               20                      14                      13                    24
P3              Killing Humans          18              29                      23                      24                    35
P4              How to Murder People            27              38                      32                      35                    46
P5              Women in STEM           36              47                      41                      46                    57
P6              Men's Mental Health             45              56                      50                      57                    68
P7              Eco Projects            54              65                      59                      68                    79
P8              Marine Conservation             63              74                      68                      79                    90
------------------------------------------------------------------------------------------------------------------------------------------------
Avg                                     15.8            21.2                    18.2

Total Time: 90
Idle Time: 42
Burst Time: 48
Efficiency is 0.53
Throughput is 88.89 per a second
================================================================================================================================================
```

RR

```
File being executed: test/Arrival_timeVer2.csv

=================================================================================================================================================
                                                RR
=================================================================================================================================================
                  Title          Response Time    Turnaround Time          Waiting Time              Start Time            End Time
P1              Making Bombs            0               11                      5                       2                     28
P2              Making Weapons          9               20                      14                      4                     39
P3              Killing Humans          18              29                      23                      6                     44
P4              How to Murder People            27              38                      32                      8                     47
P5              Women in STEM           36              47                      41                      10                    48
P6              Men's Mental Health             45              56                      50                      12                    49
P7              Eco Projects            54              65                      59                      14                    50
P8              Marine Conservation             63              74                      68                      16                    51
-------------------------------------------------------------------------------------------------------------------------------------------------
Avg                                     10.5            14.2                    12.2

Total Time: 51
Idle Time: 3
Burst Time: 48
Efficiency is 0.94
Throughput is 156.86 per a second
=================================================================================================================================================
```

MLFQ

```
File being executed: test/Arrival_timeVer2.csv

=================================================================================================================================================
                                                MLFQ
=================================================================================================================================================
                  Title          Response Time    Turnaround Time          Waiting Time              Start Time            End Time
P1              Making Bombs            0               11                      5                       2                     29
P2              Making Weapons          9               20                      14                      5                     32
P3              Killing Humans          18              29                      23                      8                     35
P5              Women in STEM           27              38                      32                      11                    41
P6              Men's Mental Health             36              47                      41                      14                    44
P8              Marine Conservation             45              56                      50                      17                    50
P7              Eco Projects            54              65                      59                      20                    47
P4              How to Murder People            63              74                      68                      23                    38
-------------------------------------------------------------------------------------------------------------------------------------------------
Avg                                     7.9             10.6                    9.1

Total Time: 50
Idle Time: 2
Burst Time: 48
Efficiency is 0.96
Throughput is 160.00 per a second
=================================================================================================================================================
```

ChatGPT

```
File being executed: test/Arrival_timeVer2.csv

ChatGPT Scheduler not yet implemented
=================================================================================================================================================
                                                GPT4S
=================================================================================================================================================
                  Title          Response Time    Turnaround Time          Waiting Time              Start Time            End Time
P1              Making Bombs            0               11                      5                       2                     18
P3              Killing Humans          9               20                      14                      6                     44
P2              Making Weapons          18              29                      23                      8                     24
P6              Men's Mental Health             27              38                      32                      12                    53
P7              Eco Projects            36              47                      41                      15                    51
P4              How to Murder People            45              56                      50                      19                    52
P5              Women in STEM           54              65                      59                      21                    55
P8              Marine Conservation             63              74                      68                      24                    64
-------------------------------------------------------------------------------------------------------------------------------------------------
Avg                                     6.3             8.5                     7.3

Total Time: 64
Idle Time: 16
Burst Time: 48
Efficiency is 0.75
Throughput is 125.00 per a second
=================================================================================================================================================
```

GEMINI

```
File being executed: test/Arrival_timeVer2.csv

Gemini Scheduler not yet implemented
================================================================================================================================================
                                                GEMINIS
================================================================================================================================================
                  Title          Response Time    Turnaround Time          Waiting Time             Start Time           End Time
P1             Making Bombs           0               11                      5                       2                    16
P3             Killing Humans         9               20                      14                      11                   32
P2             Making Weapons         18              29                      23                      12                   28
P8             Marine Conservation            27              38                      32                      16                   68
P4             How to Murder People           36              47                      41                      18                   48
P6             Men's Mental Health            45              56                      50                      33                   55
P7             Eco Projects           54              65                      59                      36                   65
P5             Women in STEM          63              74                      68                      38                   53
------------------------------------------------------------------------------------------------------------------------------------------------
Avg                                   5.2             7.1                     6.1

Total Time: 68
Idle Time: 20
Burst Time: 48
Efficiency is 0.71
Throughput is 117.65 per a second
================================================================================================================================================
```

Arrival_TimeVer3.csv

cpu-scheduling-algorithm-master > test > Arrival_timeVer3.csv > data

```
1  process_id,arrival_time,cpu_time1,io_time,cpu_time2,title
2  1,2,3,5,3,Making Bombs
3  2,4,3,5,3,Men's Mental Health
4  3,6,3,5,3,Killing Humans
5  4,8,3,5,3,Eco Projects
6  5,10,3,5,3,Women in STEM
7  6,12,3,5,3,Making Weapons
8  7,14,3,5,3,Marine Conservation
9  8,16,3,5,3,How to Murder People
```

FCFS

```
File being executed: test/Arrival_timeVer3.csv

================================================================================================================================================
                                                FCFS
================================================================================================================================================
                  Title          Response Time    Turnaround Time          Waiting Time             Start Time           End Time
P1             Making Bombs           0               11                      5                       2                    13
P2             Men's Mental Health            9               20                      14                      13                   24
P3             Killing Humans         18              29                      23                      24                   35
P4             Eco Projects           27              38                      32                      35                   46
P5             Women in STEM          36              47                      41                      46                   57
P6             Making Weapons         45              56                      50                      57                   68
P7             Marine Conservation            54              65                      59                      68                   79
P8             How to Murder People           63              74                      68                      79                   90
------------------------------------------------------------------------------------------------------------------------------------------------
Avg                                   31.5            42.5                    36.5

Total Time: 90
Idle Time: 42
Burst Time: 48
Efficiency is 0.53
Throughput is 88.89 per a second
================================================================================================================================================
```

SJF

```
File being executed: test/Arrival_timeVer3.csv

=================================================================================================================================================
                                        SJF
=================================================================================================================================================
    Title          Response Time   Turnaround Time          Waiting Time             Start Time           End Time
P1              Making Bombs            0               11                  5                   2                   13
P2              Men's Mental Health             9               20                  14                  13                  24
P3              Killing Humans          18              29                  23                  24                  35
P4              Eco Projects            27              38                  32                  35                  46
P5              Women in STEM           36              47                  41                  46                  57
P6              Making Weapons          45              56                  50                  57                  68
P7              Marine Conservation             54              65                  59                  68                  79
P8              How to Murder People            63              74                  68                  79                  90
-------------------------------------------------------------------------------------------------------------------------------------------------
Avg                                     15.8            21.2                18.2

Total Time: 90
Idle Time: 42
Burst Time: 48
Efficiency is 0.53
Throughput is 88.89 per a second
=================================================================================================================================================
```

RR

```
File being executed: test/Arrival_timeVer3.csv

=================================================================================================================================================
                                        RR
=================================================================================================================================================
    Title          Response Time   Turnaround Time          Waiting Time             Start Time           End Time
P1              Making Bombs            0               11                  5                   2                   28
P2              Men's Mental Health             9               20                  14                  4                   39
P3              Killing Humans          18              29                  23                  6                   44
P4              Eco Projects            27              38                  32                  8                   47
P5              Women in STEM           36              47                  41                  10                  48
P6              Making Weapons          45              56                  50                  12                  49
P7              Marine Conservation             54              65                  59                  14                  50
P8              How to Murder People            63              74                  68                  16                  51
-------------------------------------------------------------------------------------------------------------------------------------------------
Avg                                     10.5            14.2                12.2

Total Time: 51
Idle Time: 3
Burst Time: 48
Efficiency is 0.94
Throughput is 156.86 per a second
=================================================================================================================================================
```

MLFQ

```
File being executed: test/Arrival_timeVer3.csv

=================================================================================================================================================
                                        MLFQ
=================================================================================================================================================
    Title          Response Time   Turnaround Time          Waiting Time             Start Time           End Time
P1              Making Bombs            0               11                  5                   2                   29
P2              Men's Mental Health             9               20                  14                  5                   32
P3              Killing Humans          18              29                  23                  8                   35
P5              Women in STEM           27              38                  32                  11                  41
P6              Making Weapons          36              47                  41                  14                  44
P8              How to Murder People            45              56                  50                  17                  50
P7              Marine Conservation             54              65                  59                  20                  47
P4              Eco Projects            63              74                  68                  23                  38
-------------------------------------------------------------------------------------------------------------------------------------------------
Avg                                     7.9             10.6                9.1

Total Time: 50
Idle Time: 2
Burst Time: 48
Efficiency is 0.96
Throughput is 160.00 per a second
=================================================================================================================================================
```

ChatGPT- 3.5

```
File being executed: test/Arrival_timeVer3.csv

ChatGPT Scheduler not yet implemented
================================================================================================================================================
                                        GPT4S
================================================================================================================================================
                Title          Response Time   Turnaround Time          Waiting Time            Start Time           End Time
P1              Making Bombs            0               11                      5                       2                       14
P2              Men's Mental Health             9               20                      14                      4                       23
P7              Marine Conservation             18              29                      23                      14                      49
P4              Eco Projects            27              38                      32                      17                      41
P6              Making Weapons          36              47                      41                      20                      50
P5              Women in STEM           45              56                      50                      21                      46
P3              Killing Humans          54              65                      59                      23                      54
P8              How to Murder People            63              74                      68                      28                      60
------------------------------------------------------------------------------------------------------------
Avg                                     6.3             8.5                     7.3

Total Time: 60
Idle Time: 12
Burst Time: 48
Efficiency is 0.80
Throughput is 133.33 per a second
============================================================================================================
```

GEMINI

```
File being executed: test/Arrival_timeVer3.csv

Gemini Scheduler not yet implemented
================================================================================================================================================
                                        GEMINIS
================================================================================================================================================
                Title          Response Time   Turnaround Time          Waiting Time            Start Time           End Time
P1              Making Bombs            0               11                      5                       2                       13
P2              Men's Mental Health             9               20                      14                      7                       22
P6              Making Weapons          18              29                      23                      14                      38
P3              Killing Humans          27              38                      32                      16                      33
P7              Marine Conservation             36              47                      41                      17                      67
P5              Women in STEM           45              56                      50                      30                      56
P8              How to Murder People            54              65                      59                      34                      58
P4              Eco Projects            63              74                      68                      43                      55
------------------------------------------------------------------------------------------------------------
Avg                                     5.2             7.1                     6.1

Total Time: 67
Idle Time: 19
Burst Time: 48
Efficiency is 0.72
Throughput is 119.40 per a second
============================================================================================================
```

Set0_CPU_Time1.csv

cpu-scheduling-algorithm-master > test > Set0_CPU_Time1.csv > data

```
process_id,arrival_time,cpu_time1,io_time,cpu_time2,title
1,1,2,3,5,Women in STEM
2,1,4,3,5,Men's Mental Health
3,1,6,3,5,Eco Projects
4,1,8,3,5,Marine Conservation
5,1,10,3,5,Making Bombs
6,1,12,3,5,Making Weapons
7,1,14,3,5,Killing Humans
8,1,16,3,5,How to Murder People
```

FCFS

```
File being executed: test/Set0_CPU_Time1.csv

=================================================================================================================================================
                                                FCFS
=================================================================================================================================================
                Title          Response Time    Turnaround Time          Waiting Time            Start Time          End Time
P1              Women in STEM           0               10                      3                       1                       11
P2              Men's Mental Health             10              22                      13                      11                      23
P3              Eco Projects            22              36                      25                      23                      37
P4              Marine Conservation             36              52                      39                      37                      53
P5              Making Bombs            52              70                      55                      53                      71
P6              Making Weapons          70              90                      73                      71                      91
P7              Killing Humans          90              112                     93                      91                      113
P8              How to Murder People            112             136                     115                     113                     137
-------------------------------------------------------------------------------------------------
Avg                                     49.0            66.0                    52.0

Total Time: 137
Idle Time: 25
Burst Time: 112
Efficiency is 0.82
Throughput is 58.39 per a second
=================================================================================================
```

SJF

```
File being executed: test/Set0_CPU_Time1.csv

=================================================================================================================================================
                                                SJF
=================================================================================================================================================
                Title          Response Time    Turnaround Time          Waiting Time            Start Time          End Time
P1              Women in STEM           0               10                      3                       1                       11
P2              Men's Mental Health             10              22                      13                      11                      23
P3              Eco Projects            22              36                      25                      23                      37
P4              Marine Conservation             36              52                      39                      37                      53
P5              Making Bombs            52              70                      55                      53                      71
P6              Making Weapons          70              90                      73                      71                      91
P7              Killing Humans          90              112                     93                      91                      113
P8              How to Murder People            112             136                     115                     113                     137
-------------------------------------------------------------------------------------------------
Avg                                     24.5            33.0                    26.0

Total Time: 137
Idle Time: 25
Burst Time: 112
Efficiency is 0.82
Throughput is 58.39 per a second
=================================================================================================
```

RR

```
File being executed: test/Set0_CPU_Time1.csv

=================================================================================================================================================
                                                RR
=================================================================================================================================================
                Title          Response Time    Turnaround Time          Waiting Time            Start Time          End Time
P1              Women in STEM           0               10                      3                       1                       50
P2              Men's Mental Health             10              22                      13                      2                       65
P3              Eco Projects            22              36                      25                      3                       78
P4              Marine Conservation             36              52                      39                      4                       89
P5              Making Bombs            52              70                      55                      5                       98
P6              Making Weapons          70              90                      73                      6                       105
P7              Killing Humans          90              112                     93                      7                       111
P8              How to Murder People            112             136                     115                     8                       114
-------------------------------------------------------------------------------------------------
Avg                                     16.3            22.0                    17.3

Total Time: 114
Idle Time: 2
Burst Time: 112
Efficiency is 0.98
Throughput is 70.18 per a second
=================================================================================================
```

MLFQ

```
File being executed: test/Set0_CPU_Time1.csv

=========================================================================================================================================================
                                        MLFQ
=========================================================================================================================================================
                Title          Response Time   Turnaround Time          Waiting Time            Start Time           End Time
P1              Women in STEM           0               10                      3                   1                       58
P2              Men's Mental Health             10              22                      13                  3                       63
P3              Eco Projects            22              36                      25                  7                       68
P4              Marine Conservation             36              52                      39                  13                      73
P5              Making Bombs            52              70                      55                  21                      98
P6              Making Weapons          70              90                      73                  29                      103
P7              Killing Humans          90              112                     93                  37                      108
P8              How to Murder People            112             136                     115                 45                      113
---------------------------------------------------------------------------------------------------------------------------------------------------------
Avg                                     12.2            16.5                    13.0

Total Time: 113
Idle Time: 1
Burst Time: 112
Efficiency is 0.99
Throughput is 70.80 per a second
=========================================================================================================================================================
```

ChatGPT-3.5

```
File being executed: test/Set0_CPU_Time1.csv

ChatGPT Scheduler not yet implemented
=========================================================================================================================================================
                                        GPT4S
=========================================================================================================================================================
                Title          Response Time   Turnaround Time          Waiting Time            Start Time           End Time
P2              Men's Mental Health             0               10                      3                   1                       15
P3              Eco Projects            10              22                      13                  6                       64
P4              Marine Conservation             22              36                      25                  8                       60
P6              Making Weapons          36              52                      39                  11                      102
P1              Women in STEM           52              70                      55                  15                      42
P7              Killing Humans          70              90                      73                  16                      115
P5              Making Bombs            90              112                     93                  17                      87
P8              How to Murder People            112             136                     115                 20                      125
---------------------------------------------------------------------------------------------------------------------------------------------------------
Avg                                     9.8             13.2                    10.4

Total Time: 125
Idle Time: 13
Burst Time: 112
Efficiency is 0.90
Throughput is 64.00 per a second
=========================================================================================================================================================
```

Gemini

```
=========================================================================================================================================================
                                        GEMINIS
=========================================================================================================================================================
                Title          Response Time   Turnaround Time          Waiting Time            Start Time           End Time
P1              Women in STEM           0               24                      17                  1                       25
P8              How to Murder People            1               127                     106                 2                       128
P2              Men's Mental Health             2               33                      24                  3                       34
P3              Eco Projects            3               36                      25                  4                       37
P4              Marine Conservation             10              56                      43                  11                      57
P5              Making Bombs            15              75                      60                  16                      76
P6              Making Weapons          17              99                      82                  18                      100
P7              Killing Humans          21              126                     107                 22                      127
---------------------------------------------------------------------------------------------------------------------------------------------------------
Avg                                     8.6             72.0                    58.0

Total Time: 128
Idle Time: 16
Burst Time: 112
Efficiency is 0.88
Throughput is 62.50 per a second
=========================================================================================================================================================
```

Set0_CPU_Time1ver2.csv

cpu-scheduling-algorithm-master > test > Set0_CPU_Time1ver2.csv > data

```
process_id,arrival_time,cpu_time1,io_time,cpu_time2,title
1,1,2,3,5,Making Bombs
2,1,4,3,5,Making Weapons
3,1,6,3,5,Killing Humans
4,1,8,3,5,How to Murder People
5,1,10,3,5,Women in STEM
6,1,12,3,5,Men's Mental Health
7,1,14,3,5,Eco Projects
8,1,16,3,5,Marine Conservation
```

FCFS

```
File being executed: test/Set0_CPU_Time1ver2.csv

================================================================================================================================================
                                                FCFS
================================================================================================================================================
                  Title          Response Time    Turnaround Time          Waiting Time             Start Time           End Time
P1              Making Bombs            0               10                      3                       1                   11
P2              Making Weapons          10              22                      13                      11                  23
P3              Killing Humans          22              36                      25                      23                  37
P4              How to Murder People            36              52                      39                      37                  53
P5              Women in STEM           52              70                      55                      53                  71
P6              Men's Mental Health             70              90                      73                      71                  91
P7              Eco Projects            90              112                     93                      91                  113
P8              Marine Conservation             112             136                     115                     113                 137
------------------------------------------------------------------------------------------------------------------------------------------------
Avg                                     49.0            66.0                    52.0

Total Time: 137
Idle Time: 25
Burst Time: 112
Efficiency is 0.82
Throughput is 58.39 per a second
================================================================================================================================================
```

SJF

```
File being executed: test/Set0_CPU_Time1ver2.csv

================================================================================================================================================
                                              SJF
================================================================================================================================================
                  Title          Response Time    Turnaround Time          Waiting Time             Start Time           End Time
P1              Making Bombs            0               10                      3                       1                   11
P2              Making Weapons          10              22                      13                      11                  23
P3              Killing Humans          22              36                      25                      23                  37
P4              How to Murder People            36              52                      39                      37                  53
P5              Women in STEM           52              70                      55                      53                  71
P6              Men's Mental Health             70              90                      73                      71                  91
P7              Eco Projects            90              112                     93                      91                  113
P8              Marine Conservation             112             136                     115                     113                 137
------------------------------------------------------------------------------------------------------------------------------------------------
Avg                                     24.5            33.0                    26.0

Total Time: 137
Idle Time: 25
Burst Time: 112
Efficiency is 0.82
Throughput is 58.39 per a second
================================================================================================================================================
```

RR

```
File being executed: test/Set0_CPU_Time1ver2.csv

=================================================================================================================================================
                                                RR
=================================================================================================================================================
                  Title          Response Time   Turnaround Time          Waiting Time             Start Time           End Time
P1              Making Bombs            0              10                      3                       1                    50
P2              Making Weapons          10             22                      13                      2                    65
P3              Killing Humans          22             36                      25                      3                    78
P4              How to Murder People            36             52                      39                      4                    89
P5              Women in STEM           52             70                      55                      5                    98
P6              Men's Mental Health             70             90                      73                      6                    105
P7              Eco Projects            90             112                     93                      7                    111
P8              Marine Conservation             112            136                     115                     8                    114
-------------------------------------------------------------------------------------------------------------------------------------------------
Avg                                     16.3           22.0                    17.3

Total Time: 114
Idle Time: 2
Burst Time: 112
Efficiency is 0.98
Throughput is 70.18 per a second
=================================================================================================================================================
```

MLFQ

```
File being executed: test/Set0_CPU_Time1ver2.csv

=================================================================================================================================================
                                                MLFQ
=================================================================================================================================================
                  Title          Response Time   Turnaround Time          Waiting Time             Start Time           End Time
P1              Making Bombs            0              10                      3                       1                    58
P2              Making Weapons          10             22                      13                      3                    63
P3              Killing Humans          22             36                      25                      7                    68
P4              How to Murder People            36             52                      39                      13                   73
P5              Women in STEM           52             70                      55                      21                   98
P6              Men's Mental Health             70             90                      73                      29                   103
P7              Eco Projects            90             112                     93                      37                   108
P8              Marine Conservation             112            136                     115                     45                   113
-------------------------------------------------------------------------------------------------------------------------------------------------
Avg                                     12.2           16.5                    13.0

Total Time: 113
Idle Time: 1
Burst Time: 112
Efficiency is 0.99
Throughput is 70.80 per a second
=================================================================================================================================================
```

ChatGPT3.5

```
=================================================================================================================================================
                                                GPT4S
=================================================================================================================================================
                  Title          Response Time   Turnaround Time          Waiting Time             Start Time           End Time
P4              How to Murder People            0              10                      3                       1                    75
P1              Making Bombs            10             22                      13                      2                    27
P8              Marine Conservation             22             36                      25                      3                    124
P2              Making Weapons          36             52                      39                      4                    30
P3              Killing Humans          52             70                      55                      5                    66
P6              Men's Mental Health             70             90                      73                      6                    97
P5              Women in STEM           90             112                     93                      9                    100
P7              Eco Projects            112            136                     115                     12                   115
-------------------------------------------------------------------------------------------------------------------------------------------------
Avg                                     9.8            13.2                    10.4

Total Time: 124
Idle Time: 12
Burst Time: 112
Efficiency is 0.90
Throughput is 64.52 per a second
=================================================================================================================================================
```

GEMINI

```
================================================================================================================================================
                                                GEMINIS
================================================================================================================================================
                  Title          Response Time    Turnaround Time          Waiting Time             Start Time           End Time
P1              Making Bombs            0               10                      3                       1                   13
P8              Marine Conservation             10              22                      13                      2                   125
P7              Eco Projects            22              36                      25                      5                   128
P6              Men's Mental Health             36              52                      39                      6                   94
P5              Women in STEM           52              70                      55                      7                   76
P2              Making Weapons          70              90                      73                      14                  26
P3              Killing Humans          90              112                     93                      27                  45
P4              How to Murder People            112             136                     115                     28                  65
------------------------------------------------------------------------------------------------------------------------------------------------
Avg                                     8.2             11.0                    8.7

Total Time: 128
Idle Time: 16
Burst Time: 112
Efficiency is 0.88
Throughput is 62.50 per a second
================================================================================================================================================
```

Set0_CPU_Time1ver3.csv

cpu-scheduling-algorithm-master > test > Set0_CPU_Time1ver3.csv > d

```
1   process_id,arrival_time,cpu_time1,io_time,cpu_time2,title
2   1,1,2,3,5,Making Bombs
3   2,1,4,3,5,Men's Mental Health
4   3,1,6,3,5,Killing Humans
5   4,1,8,3,5,Marine Conservation
6   5,1,10,3,5,Women in STEM
7   6,1,12,3,5,Making Weapons
8   7,1,14,3,5,Eco Projects
9   8,1,16,3,5,How to Murder People
```

FCFS

```
File being executed: test/Set0_CPU_Time1ver3.csv

================================================================================================================================================
                                                FCFS
================================================================================================================================================
                  Title          Response Time    Turnaround Time          Waiting Time             Start Time           End Time
P1              Making Bombs            0               10                      3                       1                   11
P2              Men's Mental Health             10              22                      13                      11                  23
P3              Killing Humans          22              36                      25                      23                  37
P4              Marine Conservation             36              52                      39                      37                  53
P5              Women in STEM           52              70                      55                      53                  71
P6              Making Weapons          70              90                      73                      71                  91
P7              Eco Projects            90              112                     93                      91                  113
P8              How to Murder People            112             136                     115                     113                 137
------------------------------------------------------------------------------------------------------------------------------------------------
Avg                                     49.0            66.0                    52.0

Total Time: 137
Idle Time: 25
Burst Time: 112
Efficiency is 0.82
Throughput is 58.39 per a second
================================================================================================================================================
```

SJF

```
File being executed: test/Set0_CPU_Time1ver3.csv

=================================================================================================================================================
                                                SJF
=================================================================================================================================================
                  Title          Response Time    Turnaround Time          Waiting Time             Start Time           End Time
P1              Making Bombs            0               10                      3                       1                   11
P2              Men's Mental Health             10              22                      13                      11                  23
P3              Killing Humans          22              36                      25                      23                  37
P4              Marine Conservation             36              52                      39                      37                  53
P5              Women in STEM           52              70                      55                      53                  71
P6              Making Weapons          70              90                      73                      71                  91
P7              Eco Projects            90              112                     93                      91                  113
P8              How to Murder People            112             136                     115                     113                 137
-------------------------------------------------------------------------------------------------------------
Avg                                     24.5            33.0                    26.0

Total Time: 137
Idle Time: 25
Burst Time: 112
Efficiency is 0.82
Throughput is 58.39 per a second
=============================================================================================
```

RR

```
File being executed: test/Set0_CPU_Time1ver3.csv

=================================================================================================================================================
                                                RR
=================================================================================================================================================
                  Title          Response Time    Turnaround Time          Waiting Time             Start Time           End Time
P1              Making Bombs            0               10                      3                       1                   50
P2              Men's Mental Health             10              22                      13                      2                   65
P3              Killing Humans          22              36                      25                      3                   78
P4              Marine Conservation             36              52                      39                      4                   89
P5              Women in STEM           52              70                      55                      5                   98
P6              Making Weapons          70              90                      73                      6                   105
P7              Eco Projects            90              112                     93                      7                   111
P8              How to Murder People            112             136                     115                     8                   114
-------------------------------------------------------------------------------------------------------------
Avg                                     16.3            22.0                    17.3

Total Time: 114
Idle Time: 2
Burst Time: 112
Efficiency is 0.98
Throughput is 70.18 per a second
=============================================================================================
```

MLFQ

```
File being executed: test/Set0_CPU_Time1ver3.csv

=========================================================================================================================================================
                                        MLFQ
=========================================================================================================================================================
                  Title          Response Time   Turnaround Time          Waiting Time             Start Time           End Time
P1              Making Bombs            0              10                      3                       1                   58
P2              Men's Mental Health             10              22                      13                      3                   63
P3              Killing Humans          22              36                      25                      7                   68
P4              Marine Conservation             36              52                      39                      13                  73
P5              Women in STEM           52              70                      55                      21                  98
P6              Making Weapons          70              90                      73                      29                  103
P7              Eco Projects            90              112                     93                      37                  108
P8              How to Murder People            112             136                     115                     45                  113
---------------------------------------------------------------------------------------------------------
Avg                                     12.2            16.5                    13.0

Total Time: 113
Idle Time: 1
Burst Time: 112
Efficiency is 0.99
Throughput is 70.80 per a second
=========================================================================================
```

ChatGPT-3.5

```
File being executed: test/Set0_CPU_Time1ver3.csv

ChatGPT Scheduler not yet implemented
=================================================================================================================================================
                                        GPT4S
=================================================================================================================================================
                  Title          Response Time   Turnaround Time          Waiting Time             Start Time           End Time
P4              Marine Conservation             0               10                      3                       1                   70
P2              Men's Mental Health             10              22                      13                      2                   16
P3              Killing Humans          22              36                      25                      3                   71
P5              Women in STEM           36              52                      39                      5                   91
P1              Making Bombs            52              70                      55                      16                  40
P6              Making Weapons          70              90                      73                      17                  113
P7              Eco Projects            90              112                     93                      18                  119
P8              How to Murder People            112             136                     115                     19                  126
---------------------------------------------------------------------------------------------------------
Avg                                     9.8             13.2                    10.4

Total Time: 126
Idle Time: 14
Burst Time: 112
Efficiency is 0.89
Throughput is 63.49 per a second
=========================================================================================
```

GEMINI

```
File being executed: test/Set0_CPU_Time1ver3.csv

Gemini Scheduler not yet implemented
=================================================================================================================================================
                                        GEMINIS
=================================================================================================================================================
                  Title          Response Time   Turnaround Time          Waiting Time             Start Time           End Time
P7              Eco Projects            0               10                      3                       1                   125
P1              Making Bombs            10              22                      13                      2                   27
P2              Men's Mental Health             22              36                      25                      3                   29
P3              Killing Humans          36              52                      39                      4                   45
P4              Marine Conservation             52              70                      55                      5                   65
P5              Women in STEM           70              90                      73                      6                   80
P8              How to Murder People            90              112                     93                      7                   128
P6              Making Weapons          112             136                     115                     8                   107
---------------------------------------------------------------------------------------------------------
Avg                                     8.2             11.0                    8.7

Total Time: 128
Idle Time: 16
Burst Time: 112
Efficiency is 0.88
Throughput is 62.50 per a second
=========================================================================================
```

Set0_CPU_Time2.csv

cpu-scheduling-algorithm-master > test > Set0_CPU_Time2.csv > data

```
process_id,arrival_time,cpu_time1,io_time,cpu_time2,title
1,1,5,3,2,Women in STEM
2,1,5,3,4,Men's Mental Health
3,1,5,3,6,Eco Projects
4,1,5,3,8,Marine Conservation
5,1,5,3,10,Making Bombs
6,1,5,3,12,Making Weapons
7,1,5,3,14,Killing Humans
8,1,5,3,16,How to Murder People
```

FCFS

```
File being executed: test/Set0_CPU_Time2.csv

================================================================================================================================================
                                                FCFS
================================================================================================================================================
                 Title          Response Time   Turnaround Time          Waiting Time            Start Time           End Time
P1             Women in STEM          0              10                      3                      1                    11
P2             Men's Mental Health            10             22                      13                     11                   23
P3             Eco Projects           22             36                      25                     23                   37
P4             Marine Conservation            36             52                      39                     37                   53
P5             Making Bombs           52             70                      55                     53                   71
P6             Making Weapons         70             90                      73                     71                   91
P7             Killing Humans         90             112                     93                     91                   113
P8             How to Murder People           112            136                     115                    113                  137
------------------------------------------------------------------------------------------------------------------------------------------------
Avg                                   49.0           66.0                    52.0

Total Time: 137
Idle Time: 25
Burst Time: 112
Efficiency is 0.82
Throughput is 58.39 per a second
================================================================================================================================================
```

SJF

```
File being executed: test/Set0_CPU_Time2.csv

================================================================================================================================================
                                                SJF
================================================================================================================================================
                 Title          Response Time   Turnaround Time          Waiting Time            Start Time           End Time
P1             Women in STEM          0              10                      3                      1                    11
P2             Men's Mental Health            10             22                      13                     11                   23
P3             Eco Projects           22             36                      25                     23                   37
P4             Marine Conservation            36             52                      39                     37                   53
P5             Making Bombs           52             70                      55                     53                   71
P6             Making Weapons         70             90                      73                     71                   91
P7             Killing Humans         90             112                     93                     91                   113
P8             How to Murder People           112            136                     115                    113                  137
------------------------------------------------------------------------------------------------------------------------------------------------
Avg                                   24.5           33.0                    26.0

Total Time: 137
Idle Time: 25
Burst Time: 112
Efficiency is 0.82
Throughput is 58.39 per a second
================================================================================================================================================
```

RR

```
File being executed: test/Set0_CPU_Time2.csv

=================================================================================================================================================
                                                RR
=================================================================================================================================================
                  Title          Response Time   Turnaround Time          Waiting Time             Start Time           End Time
P1              Women in STEM          0               10                      3                       1                    50
P2              Men's Mental Health            10              22                      13                      2                    65
P3              Eco Projects           22              36                      25                      3                    78
P4              Marine Conservation            36              52                      39                      4                    89
P5              Making Bombs           52              70                      55                      5                    98
P6              Making Weapons         70              90                      73                      6                    105
P7              Killing Humans         90              112                     93                      7                    110
P8              How to Murder People           112             136                     115                     8                    113
-------------------------------------------------------------------------------------------------------------------------------------------------
Avg                                    16.3            22.0                    17.3

Total Time: 113
Idle Time: 1
Burst Time: 112
Efficiency is 0.99
Throughput is 70.80 per a second
=================================================================================================================================================
```

MLFQ

```
File being executed: test/Set0_CPU_Time2.csv

=================================================================================================================================================
                                                MLFQ
=================================================================================================================================================
                  Title          Response Time   Turnaround Time          Waiting Time             Start Time           End Time
P1              Women in STEM          0               10                      3                       1                    43
P2              Men's Mental Health            10              22                      13                      6                    47
P3              Eco Projects           22              36                      25                      11                   53
P4              Marine Conservation            36              52                      39                      16                   61
P5              Making Bombs           52              70                      55                      21                   71
P6              Making Weapons         70              90                      73                      26                   83
P7              Killing Humans         90              112                     93                      31                   97
P8              How to Murder People           112             136                     115                     36                   113
-------------------------------------------------------------------------------------------------------------------------------------------------
Avg                                    12.2            16.5                    13.0

Total Time: 113
Idle Time: 1
Burst Time: 112
Efficiency is 0.99
Throughput is 70.80 per a second
=================================================================================================================================================
```

ChatGPT- 3.5

```
File being executed: test/Set0_CPU_Time2.csv

ChatGPT Scheduler not yet implemented
=================================================================================================================================================
                                                GPT4S
=================================================================================================================================================
                  Title          Response Time   Turnaround Time          Waiting Time             Start Time           End Time
P2              Men's Mental Health            0               10                      3                       1                    28
P1              Women in STEM          10              22                      13                      2                    56
P3              Eco Projects           22              36                      25                      4                    105
P4              Marine Conservation            36              52                      39                      5                    72
P7              Killing Humans         52              70                      55                      7                    101
P5              Making Bombs           70              90                      73                      8                    77
P6              Making Weapons         90              112                     93                      16                   88
P8              How to Murder People           112             136                     115                     21                   117
-------------------------------------------------------------------------------------------------------------------------------------------------
Avg                                    9.8             13.2                    10.4

Total Time: 117
Idle Time: 5
Burst Time: 112
Efficiency is 0.96
Throughput is 68.38 per a second
=================================================================================================================================================
```

GEMINI

```
File being executed: test/Set0_CPU_Time2.csv

Gemini Scheduler not yet implemented
=================================================================================================================================================
                                                GEMINIS
=================================================================================================================================================
                Title          Response Time    Turnaround Time          Waiting Time             Start Time           End Time
P1              Women in STEM          0               10                      3                       1                    20
P8              How to Murder People           10              22                      13                      3                    118
P7              Killing Humans         22              36                      25                      4                    113
P2              Men's Mental Health            36              52                      39                      5                    51
P3              Eco Projects           52              70                      55                      6                    65
P4              Marine Conservation            70              90                      73                      7                    75
P5              Making Bombs           90              112                     93                      9                    89
P6              Making Weapons         112             136                     115                     10                   110
-------------------------------------------------------------------------------------------------------------------------------------------------
Avg                                    8.2             11.0                    8.7

Total Time: 118
Idle Time: 6
Burst Time: 112
Efficiency is 0.95
Throughput is 67.80 per a second
=================================================================================================================================================
```

Set0_CPU_Time2ver2.csv

cpu-scheduling-algorithm-master > test > Set0_CPU_Time2ver2.csv > data

```
1  process_id,arrival_time,cpu_time1,io_time,cpu_time2,title
2  1,1,5,3,2,Making Bombs
3  2,1,5,3,4,Making Weapons
4  3,1,5,3,6,Killing Humans
5  4,1,5,3,8,How to Murder People
6  5,1,5,3,10,Women in STEM
7  6,1,5,3,12,Men's Mental Health
8  7,1,5,3,14,Eco Projects
9  8,1,5,3,16,Marine Conservation
```

FCFS

```
File being executed: test/Set0_CPU_Time2ver2.csv

=================================================================================================================================================
                                                FCFS
=================================================================================================================================================
                Title          Response Time    Turnaround Time          Waiting Time             Start Time           End Time
P1              Making Bombs           0               10                      3                       1                    11
P2              Making Weapons         10              22                      13                      11                   23
P3              Killing Humans         22              36                      25                      23                   37
P4              How to Murder People           36              52                      39                      37                   53
P5              Women in STEM          52              70                      55                      53                   71
P6              Men's Mental Health            70              90                      73                      71                   91
P7              Eco Projects           90              112                     93                      91                   113
P8              Marine Conservation            112             136                     115                     113                  137
-------------------------------------------------------------------------------------------------------------------------------------------------
Avg                                    49.0            66.0                    52.0

Total Time: 137
Idle Time: 25
Burst Time: 112
Efficiency is 0.82
Throughput is 58.39 per a second
=================================================================================================================================================
```

SFJ

```
File being executed: test/Set0_CPU_Time2ver2.csv

=========================================================================================================================================================
                                                SJF
=========================================================================================================================================================
    Title          Response Time   Turnaround Time          Waiting Time             Start Time           End Time
P1  Making Bombs            0              10                    3                     1                    11
P2  Making Weapons          10             22                    13                    11                   23
P3  Killing Humans          22             36                    25                    23                   37
P4  How to Murder People            36             52                    39                    37                   53
P5  Women in STEM           52             70                    55                    53                   71
P6  Men's Mental Health             70             90                    73                    71                   91
P7  Eco Projects            90             112                   93                    91                   113
P8  Marine Conservation             112            136                   115                   113                  137
---------------------------------------------------------------------------------------------------------------------------------------------------------
Avg                         24.5           33.0                  26.0

Total Time: 137
Idle Time: 25
Burst Time: 112
Efficiency is 0.82
Throughput is 58.39 per a second
=========================================================================================================================================================
```

RR

```
File being executed: test/Set0_CPU_Time2ver2.csv

=========================================================================================================================================================
                                                RR
=========================================================================================================================================================
    Title          Response Time   Turnaround Time          Waiting Time             Start Time           End Time
P1  Making Bombs            0              10                    3                     1                    50
P2  Making Weapons          10             22                    13                    2                    65
P3  Killing Humans          22             36                    25                    3                    78
P4  How to Murder People            36             52                    39                    4                    89
P5  Women in STEM           52             70                    55                    5                    98
P6  Men's Mental Health             70             90                    73                    6                    105
P7  Eco Projects            90             112                   93                    7                    110
P8  Marine Conservation             112            136                   115                   8                    113
---------------------------------------------------------------------------------------------------------------------------------------------------------
Avg                         16.3           22.0                  17.3

Total Time: 113
Idle Time: 1
Burst Time: 112
Efficiency is 0.99
Throughput is 70.80 per a second
=========================================================================================================================================================
```

MLFQ

```
File being executed: test/Set0_CPU_Time2ver2.csv

=========================================================================================================================================================
                                                MLFQ
=========================================================================================================================================================
    Title          Response Time   Turnaround Time          Waiting Time             Start Time           End Time
P1  Making Bombs            0              10                    3                     1                    43
P2  Making Weapons          10             22                    13                    6                    47
P3  Killing Humans          22             36                    25                    11                   53
P4  How to Murder People            36             52                    39                    16                   61
P5  Women in STEM           52             70                    55                    21                   71
P6  Men's Mental Health             70             90                    73                    26                   83
P7  Eco Projects            90             112                   93                    31                   97
P8  Marine Conservation             112            136                   115                   36                   113
---------------------------------------------------------------------------------------------------------------------------------------------------------
Avg                         12.2           16.5                  13.0

Total Time: 113
Idle Time: 1
Burst Time: 112
Efficiency is 0.99
Throughput is 70.80 per a second
=========================================================================================================================================================
```

ChatGPT-3.5

```
File being executed: test/Set0_CPU_Time2ver2.csv

ChatGPT Scheduler not yet implemented
=============================================================================================================================================================
                                                GPT4S
=============================================================================================================================================================
                  Title          Response Time    Turnaround Time          Waiting Time             Start Time           End Time
P1              Making Bombs            0               10                      3                       1                    27
P2              Making Weapons          10              22                      13                      2                    41
P6              Men's Mental Health             22              36                      25                      3                    74
P3              Killing Humans          36              52                      39                      4                    98
P7              Eco Projects            52              70                      55                      5                    106
P4              How to Murder People            70              90                      73                      8                    80
P5              Women in STEM           90              112                     93                      9                    64
P8              Marine Conservation             112             136                     115                     20                   118
-------------------------------------------------------------------------------------------------------------------------------------------------------------
Avg                                     9.8             13.2                    10.4

Total Time: 118
Idle Time: 6
Burst Time: 112
Efficiency is 0.95
Throughput is 67.80 per a second
=============================================================================================================================================================
```

GEMINI

```
File being executed: test/Set0_CPU_Time2ver2.csv

Gemini Scheduler not yet implemented
=============================================================================================================================================================
                                                GEMINIS
=============================================================================================================================================================
                  Title          Response Time    Turnaround Time          Waiting Time             Start Time           End Time
P1              Making Bombs            0               15                      8                       1                    16
P8              Marine Conservation             1               120                     99                      2                    121
P7              Eco Projects            11              123                     104                     12                   124
P6              Men's Mental Health             12              87                      70                      13                   88
P5              Women in STEM           13              88                      73                      14                   89
P2              Making Weapons          15              37                      28                      16                   38
P3              Killing Humans          18              47                      36                      19                   48
P4              How to Murder People            20              69                      56                      21                   70
-------------------------------------------------------------------------------------------------------------------------------------------------------------
Avg                                     11.2            73.2                    59.2

Total Time: 124
Idle Time: 12
Burst Time: 112
Efficiency is 0.90
Throughput is 64.52 per a second
=============================================================================================================================================================
```

Set0_CPU_Time2ver3.csv

cpu-scheduling-algorithm-master > test > Set0_CPU_Time2ver3.csv > data

```
1  process_id,arrival_time,cpu_time1,io_time,cpu_time2,title
2  1,1,5,3,2,Making Bombs
3  2,1,5,3,4,Men's Mental Health
4  3,1,5,3,6,Killing Humans
5  4,1,5,3,8,Marine Conservation
6  5,1,5,3,10,Women in STEM
7  6,1,5,3,12,Making Weapons
8  7,1,5,3,14,Eco Projects
9  8,1,5,3,16,How to Murder People
```

FCFS

```
File being executed: test/Set0_CPU_Time2ver3.csv

=============================================================================================================================================================
                                                FCFS
=============================================================================================================================================================
                  Title          Response Time    Turnaround Time          Waiting Time             Start Time           End Time
P1              Making Bombs            0               10                      3                       1                    11
P2              Men's Mental Health             10              22                      13                      11                   23
P3              Killing Humans          22              36                      25                      23                   37
P4              Marine Conservation             36              52                      39                      37                   53
P5              Women in STEM           52              70                      55                      53                   71
P6              Making Weapons          70              90                      73                      71                   91
P7              Eco Projects            90              112                     93                      91                   113
P8              How to Murder People            112             136                     115                     113                  137
-------------------------------------------------------------------------------------------------------------------------------------------------------------
Avg                                     49.0            66.0                    52.0

Total Time: 137
Idle Time: 25
Burst Time: 112
Efficiency is 0.82
Throughput is 58.39 per a second
=============================================================================================================================================================
```

SFJ

```
File being executed: test/Set0_CPU_Time2ver3.csv

=============================================================================================================================================================
                                                SJF
=============================================================================================================================================================
                  Title          Response Time    Turnaround Time          Waiting Time             Start Time           End Time
P1              Making Bombs            0               10                      3                       1                    11
P2              Men's Mental Health             10              22                      13                      11                   23
P3              Killing Humans          22              36                      25                      23                   37
P4              Marine Conservation             36              52                      39                      37                   53
P5              Women in STEM           52              70                      55                      53                   71
P6              Making Weapons          70              90                      73                      71                   91
P7              Eco Projects            90              112                     93                      91                   113
P8              How to Murder People            112             136                     115                     113                  137
-------------------------------------------------------------------------------------------------------------------------------------------------------------
Avg                                     24.5            33.0                    26.0

Total Time: 137
Idle Time: 25
Burst Time: 112
Efficiency is 0.82
Throughput is 58.39 per a second
=============================================================================================================================================================
```

RR

```
File being executed: test/Set0_CPU_Time2ver3.csv

=============================================================================================================================================================
                                                RR
=============================================================================================================================================================
                  Title          Response Time    Turnaround Time          Waiting Time             Start Time           End Time
P1              Making Bombs            0               10                      3                       1                    50
P2              Men's Mental Health             10              22                      13                      2                    65
P3              Killing Humans          22              36                      25                      3                    78
P4              Marine Conservation             36              52                      39                      4                    89
P5              Women in STEM           52              70                      55                      5                    98
P6              Making Weapons          70              90                      73                      6                    105
P7              Eco Projects            90              112                     93                      7                    110
P8              How to Murder People            112             136                     115                     8                    113
-------------------------------------------------------------------------------------------------------------------------------------------------------------
Avg                                     16.3            22.0                    17.3

Total Time: 113
Idle Time: 1
Burst Time: 112
Efficiency is 0.99
Throughput is 70.80 per a second
=============================================================================================================================================================
```

MLFQ

```
File being executed: test/Set0_CPU_Time2ver3.csv

=============================================================================================================================================================
                                                MLFQ
=============================================================================================================================================================
                  Title          Response Time    Turnaround Time          Waiting Time             Start Time           End Time
P1              Making Bombs            0               10                      3                       1                    43
P2              Men's Mental Health             10              22                      13                      6                    47
P3              Killing Humans          22              36                      25                      11                   53
P4              Marine Conservation             36              52                      39                      16                   61
P5              Women in STEM           52              70                      55                      21                   71
P6              Making Weapons          70              90                      73                      26                   83
P7              Eco Projects            90              112                     93                      31                   97
P8              How to Murder People            112             136                     115                     36                   113
-------------------------------------------------------------------------------------------------------------------------------------------------------------
Avg                                     12.2            16.5                    13.0

Total Time: 113
Idle Time: 1
Burst Time: 112
Efficiency is 0.99
Throughput is 70.80 per a second
=============================================================================================================================================================
```

ChatGPT- 3.5

```
File being executed: test/Set0_CPU_Time2ver3.csv

ChatGPT Scheduler not yet implemented
================================================================================================================================================================
                                                GPT4S
================================================================================================================================================================
                  Title          Response Time    Turnaround Time          Waiting Time             Start Time           End Time
P3              Killing Humans          0               10                      3                       1                   101
P4              Marine Conservation             10              22                      13                      2                   61
P5              Women in STEM           22              36                      25                      3                   69
P1              Making Bombs            36              52                      39                      5                   43
P6              Making Weapons          52              70                      55                      6                   79
P7              Eco Projects            70              90                      73                      8                   94
P2              Men's Mental Health             90              112                     93                      12                  46
P8              How to Murder People            112             136                     115                     15                  117
----------------------------------------------------------------------------------------------------------------
Avg                                     9.8             13.2                    10.4

Total Time: 117
Idle Time: 5
Burst Time: 112
Efficiency is 0.96
Throughput is 68.38 per a second
================================================================================================================================================================
```

GEMINI:

```
File being executed: test/Set0_CPU_Time2ver3.csv

Gemini Scheduler not yet implemented
================================================================================================================================================================
                                                GEMINIS
================================================================================================================================================================
                  Title          Response Time    Turnaround Time          Waiting Time             Start Time           End Time
P1              Making Bombs            0               10                      3                       1                   13
P2              Men's Mental Health             10              22                      13                      5                   21
P3              Killing Humans          22              36                      25                      21                  39
P4              Marine Conservation             36              52                      39                      28                  57
P5              Women in STEM           52              70                      55                      35                  70
P6              Making Weapons          70              90                      73                      40                  88
P7              Eco Projects            90              112                     93                      59                  118
P8              How to Murder People            112             136                     115                     74                  129
----------------------------------------------------------------------------------------------------------------
Avg                                     8.2             11.0                    8.7

Total Time: 129
Idle Time: 17
Burst Time: 112
Efficiency is 0.87
Throughput is 62.02 per a second
================================================================================================================================================================
```

Set0_IO_Times.csv

cpu-scheduling-algorithm-master > test > Set0_IO_Times.csv > data

```
1   process_id,arrival_time,cpu_time1,io_time,cpu_time2,title
2   1,1,5,1,4,Women in STEM
3   2,1,5,2,4,Men's Mental Health
4   3,1,5,3,4,Eco Projects
5   4,1,5,4,4,Marine Conservation
6   5,1,5,5,4,Making Bombs
7   6,1,5,6,4,Making Weapons
8   7,1,5,7,4,Killing Humans
9   8,1,5,8,4,How to Murder People
10
```

FCFS

```
File being executed: test/Set0_IO_Times.csv

=================================================================================================================================================
                                                FCFS
=================================================================================================================================================
                  Title          Response Time    Turnaround Time          Waiting Time             Start Time            End Time
P1              Women in STEM           0               10                      1                       1                      11
P2              Men's Mental Health             10              21                      12                      11                      22
P3              Eco Projects            21              33                      24                      22                      34
P4              Marine Conservation             33              46                      37                      34                      47
P5              Making Bombs            46              60                      51                      47                      61
P6              Making Weapons          60              75                      66                      61                      76
P7              Killing Humans          75              91                      82                      76                      92
P8              How to Murder People            91              108                     99                      92                      109
-------------------------------------------------------------------------------------------------------------------------------------------------
Avg                                     42.0            55.5                    46.5

Total Time: 109
Idle Time: 37
Burst Time: 72
Efficiency is 0.66
Throughput is 73.39 per a second
=================================================================================================================================================
```

SJF

```
File being executed: test/Set0_IO_Times.csv

=================================================================================================================================================
                                                SJF
=================================================================================================================================================
                  Title          Response Time    Turnaround Time          Waiting Time             Start Time            End Time
P1              Women in STEM           0               10                      1                       1                      11
P2              Men's Mental Health             10              21                      12                      11                      22
P3              Eco Projects            21              33                      24                      22                      34
P4              Marine Conservation             33              46                      37                      34                      47
P5              Making Bombs            46              60                      51                      47                      61
P6              Making Weapons          60              75                      66                      61                      76
P7              Killing Humans          75              91                      82                      76                      92
P8              How to Murder People            91              108                     99                      92                      109
-------------------------------------------------------------------------------------------------------------------------------------------------
Avg                                     21.0            27.8                    23.2

Total Time: 109
Idle Time: 37
Burst Time: 72
Efficiency is 0.66
Throughput is 73.39 per a second
=================================================================================================================================================
```

RR

```
File being executed: test/Set0_IO_Times.csv

=================================================================================================================================================
                                                RR
=================================================================================================================================================
                  Title          Response Time    Turnaround Time          Waiting Time             Start Time            End Time
P1              Women in STEM           0               10                      1                       1                      67
P2              Men's Mental Health             10              21                      12                      2                       68
P3              Eco Projects            21              33                      24                      3                       69
P4              Marine Conservation             33              46                      37                      4                       70
P5              Making Bombs            46              60                      51                      5                       71
P6              Making Weapons          60              75                      66                      6                       72
P7              Killing Humans          75              91                      82                      7                       73
P8              How to Murder People            91              108                     99                      8                       74
-------------------------------------------------------------------------------------------------------------------------------------------------
Avg                                     14.0            18.5                    15.5

Total Time: 74
Idle Time: 2
Burst Time: 72
Efficiency is 0.97
Throughput is 108.11 per a second
=================================================================================================================================================
```

MLFQ

```
File being executed: test/Set0_IO_Times.csv

=================================================================================================================================================
                                                MLFQ
=================================================================================================================================================
                  Title          Response Time   Turnaround Time          Waiting Time             Start Time           End Time
P1              Women in STEM           0               10                      1                       1                   45
P2              Men's Mental Health             10              21                      12                      6                   49
P3              Eco Projects            21              33                      24                      11                  53
P4              Marine Conservation             33              46                      37                      16                  57
P5              Making Bombs            46              60                      51                      21                  61
P6              Making Weapons          60              75                      66                      26                  65
P7              Killing Humans          75              91                      82                      31                  69
P8              How to Murder People            91              108                     99                      36                  73
-------------------------------------------------------------------------------------------------------------------------------------------------
Avg                                     10.5            13.9                    11.6

Total Time: 73
Idle Time: 1
Burst Time: 72
Efficiency is 0.99
Throughput is 109.59 per a second
=================================================================================================================================================
```

ChatGPT-3.5

```
File being executed: test/Set0_IO_Times.csv

ChatGPT Scheduler not yet implemented
=================================================================================================================================================
                                                GPT4S
=================================================================================================================================================
                  Title          Response Time   Turnaround Time          Waiting Time             Start Time           End Time
P1              Women in STEM           0               10                      1                       1                   24
P2              Men's Mental Health             10              21                      12                      2                   30
P8              How to Murder People            21              33                      24                      13                  88
P4              Marine Conservation             33              46                      37                      14                  49
P7              Killing Humans          46              60                      51                      15                  84
P3              Eco Projects            60              75                      66                      17                  61
P5              Making Bombs            75              91                      82                      28                  68
P6              Making Weapons          91              108                     99                      32                  75
-------------------------------------------------------------------------------------------------------------------------------------------------
Avg                                     8.4             11.1                    9.3

Total Time: 88
Idle Time: 16
Burst Time: 72
Efficiency is 0.82
Throughput is 90.91 per a second
=================================================================================================================================================
```

GEMINI

```
File being executed: test/Set0_IO_Times.csv

Gemini Scheduler not yet implemented
=================================================================================================================================================
                                                GEMINIS
=================================================================================================================================================
                  Title          Response Time   Turnaround Time          Waiting Time             Start Time           End Time
P1              Women in STEM           0               10                      1                       1                   27
P8              How to Murder People            10              21                      12                      2                   86
P2              Men's Mental Health             21              33                      24                      3                   29
P3              Eco Projects            33              46                      37                      5                   45
P4              Marine Conservation             46              60                      51                      13                  57
P5              Making Bombs            60              75                      66                      16                  84
P6              Making Weapons          75              91                      82                      17                  90
P7              Killing Humans          91              108                     99                      18                  89
-------------------------------------------------------------------------------------------------------------------------------------------------
Avg                                     7.0             9.2                     7.8

Total Time: 90
Idle Time: 18
Burst Time: 72
Efficiency is 0.80
Throughput is 88.89 per a second
=================================================================================================================================================
```

Set0_IO_TimesVer2.csv

cpu-scheduling-algorithm-master > test > Set0_IO_TimesVer2.csv > data

```
process_id,arrival_time,cpu_time1,io_time,cpu_time2,title
1,1,5,1,4,Making Bombs
2,1,5,2,4,Making Weapons
3,1,5,3,4,Killing Humans
4,1,5,4,4,How to Murder People
5,1,5,5,4,Women in STEM
6,1,5,6,4,Men's Mental Health
7,1,5,7,4,Eco Projects
8,1,5,8,4,Marine Conservation
```

FCFS

```
File being executed: test/Set0_IO_TimesVer2.csv

================================================================================================================================================================
                                                FCFS
================================================================================================================================================================
                 Title          Response Time    Turnaround Time          Waiting Time             Start Time           End Time
P1             Making Bombs            0               10                      1                       1                    11
P2             Making Weapons          10              21                      12                      11                   22
P3             Killing Humans          21              33                      24                      22                   34
P4             How to Murder People            33              46                      37                      34                   47
P5             Women in STEM           46              60                      51                      47                   61
P6             Men's Mental Health             60              75                      66                      61                   76
P7             Eco Projects            75              91                      82                      76                   92
P8             Marine Conservation             91              108                     99                      92                   109
----------------------------------------------------------------------------------------------------------------
Avg                                    42.0            55.5                    46.5

Total Time: 109
Idle Time: 37
Burst Time: 72
Efficiency is 0.66
Throughput is 73.39 per a second
================================================================================================================================================================
```

SFJ

```
File being executed: test/Set0_IO_TimesVer2.csv

================================================================================================================================================================
                                                SJF
================================================================================================================================================================
                 Title          Response Time    Turnaround Time          Waiting Time             Start Time           End Time
P1             Making Bombs            0               10                      1                       1                    11
P2             Making Weapons          10              21                      12                      11                   22
P3             Killing Humans          21              33                      24                      22                   34
P4             How to Murder People            33              46                      37                      34                   47
P5             Women in STEM           46              60                      51                      47                   61
P6             Men's Mental Health             60              75                      66                      61                   76
P7             Eco Projects            75              91                      82                      76                   92
P8             Marine Conservation             91              108                     99                      92                   109
----------------------------------------------------------------------------------------------------------------
Avg                                    21.0            27.8                    23.2

Total Time: 109
Idle Time: 37
Burst Time: 72
Efficiency is 0.66
Throughput is 73.39 per a second
================================================================================================================================================================
```

RR

```
File being executed: test/Set0_IO_TimesVer2.csv

=================================================================================================================================================
                                                RR
=================================================================================================================================================
                Title          Response Time   Turnaround Time          Waiting Time             Start Time           End Time
P1              Making Bombs            0              10                      1                       1                    67
P2              Making Weapons          10             21                      12                      2                    68
P3              Killing Humans          21             33                      24                      3                    69
P4              How to Murder People            33             46                      37                      4                    70
P5              Women in STEM           46             60                      51                      5                    71
P6              Men's Mental Health             60             75                      66                      6                    72
P7              Eco Projects            75             91                      82                      7                    73
P8              Marine Conservation             91             108                     99                      8                    74
-------------------------------------------------------------------------------------------------------------------------------------------------
Avg                                     14.0           18.5                    15.5

Total Time: 74
Idle Time: 2
Burst Time: 72
Efficiency is 0.97
Throughput is 108.11 per a second
=================================================================================================================================================
```

MLFQ

```
File being executed: test/Set0_IO_TimesVer2.csv

=================================================================================================================================================
                                              MLFQ
=================================================================================================================================================
                Title          Response Time   Turnaround Time          Waiting Time             Start Time           End Time
P1              Making Bombs            0              10                      1                       1                    45
P2              Making Weapons          10             21                      12                      6                    49
P3              Killing Humans          21             33                      24                      11                   53
P4              How to Murder People            33             46                      37                      16                   57
P5              Women in STEM           46             60                      51                      21                   61
P6              Men's Mental Health             60             75                      66                      26                   65
P7              Eco Projects            75             91                      82                      31                   69
P8              Marine Conservation             91             108                     99                      36                   73
-------------------------------------------------------------------------------------------------------------------------------------------------
Avg                                     10.5           13.9                    11.6

Total Time: 73
Idle Time: 1
Burst Time: 72
Efficiency is 0.99
Throughput is 109.59 per a second
=================================================================================================================================================
```

ChatGPT-3.5

```
File being executed: test/Set0_IO_TimesVer2.csv

ChatGPT Scheduler not yet implemented
=================================================================================================================================================
                                              GPT4S
=================================================================================================================================================
                Title          Response Time   Turnaround Time          Waiting Time             Start Time           End Time
P1              Making Bombs            0              10                      1                       1                    27
P2              Making Weapons          10             21                      12                      3                    31
P5              Women in STEM           21             33                      24                      8                    36
P7              Eco Projects            33             46                      37                      17                   71
P3              Killing Humans          46             60                      51                      31                   84
P4              How to Murder People            60             75                      66                      34                   80
P8              Marine Conservation             75             91                      82                      37                   86
P6              Men's Mental Health             91             108                     99                      38                   66
-------------------------------------------------------------------------------------------------------------------------------------------------
Avg                                     8.4            11.1                    9.3

Total Time: 86
Idle Time: 14
Burst Time: 72
Efficiency is 0.84
Throughput is 93.02 per a second
=================================================================================================================================================
```

GEMINI

```
File being executed: test/Set0_IO_TimesVer2.csv

Gemini Scheduler not yet implemented
================================================================================================================================================
                                                GEMINIS
================================================================================================================================================
                  Title          Response Time    Turnaround Time          Waiting Time             Start Time           End Time
P1              Making Bombs            0               10                      1                       1                   17
P8              Marine Conservation             10              21                      12                      4                   51
P7              Eco Projects            21              33                      24                      13                  90
P6              Men's Mental Health             33              46                      37                      14                  86
P5              Women in STEM           46              60                      51                      15                  73
P2              Making Weapons          60              75                      66                      17                  47
P3              Killing Humans          75              91                      82                      18                  52
P4              How to Murder People            91              108                     99                      19                  70
------------------------------------------------------------------------------------------------------------------------------------------------
Avg                                     7.0             9.2                     7.8

Total Time: 90
Idle Time: 18
Burst Time: 72
Efficiency is 0.80
Throughput is 88.89 per a second
================================================================================================================================================
```

Set0_IO_TimesVer3.csv

cpu-scheduling-algorithm-master > test > Set0_IO_TimesVer3.csv > data

```
1   process_id,arrival_time,cpu_time1,io_time,cpu_time2,title
2   1,1,5,1,4,Making Bombs
3   2,1,5,2,4,Men's Mental Health
4   3,1,5,3,4,Killing Humans
5   4,1,5,4,4,Marine Conservation
6   5,1,5,5,4,Women in STEM
7   6,1,5,6,4,Making Weapons
8   7,1,5,7,4,Eco Projects
9   8,1,5,8,4,How to Murder People
10
```

FCFS

```
File being executed: test/Set0_IO_TimesVer3.csv

================================================================================================================================================
                                                FCFS
================================================================================================================================================
                  Title          Response Time    Turnaround Time          Waiting Time             Start Time           End Time
P1              Making Bombs            0               10                      1                       1                   11
P2              Men's Mental Health             10              21                      12                      11                  22
P3              Killing Humans          21              33                      24                      22                  34
P4              Marine Conservation             33              46                      37                      34                  47
P5              Women in STEM           46              60                      51                      47                  61
P6              Making Weapons          60              75                      66                      61                  76
P7              Eco Projects            75              91                      82                      76                  92
P8              How to Murder People            91              108                     99                      92                  109
------------------------------------------------------------------------------------------------------------------------------------------------
Avg                                     42.0            55.5                    46.5

Total Time: 109
Idle Time: 37
Burst Time: 72
Efficiency is 0.66
Throughput is 73.39 per a second
================================================================================================================================================
```

SJF

```
File being executed: test/Set0_IO_TimesVer3.csv

=================================================================================================================================================
                                                SJF
=================================================================================================================================================
                  Title          Response Time    Turnaround Time          Waiting Time             Start Time           End Time
P1              Making Bombs            0               10                      1                       1                    11
P2              Men's Mental Health             10              21                      12                      11                      22
P3              Killing Humans          21              33                      24                      22                   34
P4              Marine Conservation             33              46                      37                      34                      47
P5              Women in STEM           46              60                      51                      47                   61
P6              Making Weapons          60              75                      66                      61                   76
P7              Eco Projects            75              91                      82                      76                   92
P8              How to Murder People            91              108                     99                      92                      109
-------------------------------------------------------------------------------------------------------------------------------------------------
Avg                                     21.0            27.8                    23.2

Total Time: 109
Idle Time: 37
Burst Time: 72
Efficiency is 0.66
Throughput is 73.39 per a second
=================================================================================================================================================
```

RR

```
File being executed: test/Set0_IO_TimesVer3.csv

=================================================================================================================================================
                                                RR
=================================================================================================================================================
                  Title          Response Time    Turnaround Time          Waiting Time             Start Time           End Time
P1              Making Bombs            0               10                      1                       1                    67
P2              Men's Mental Health             10              21                      12                      2                       68
P3              Killing Humans          21              33                      24                      3                    69
P4              Marine Conservation             33              46                      37                      4                       70
P5              Women in STEM           46              60                      51                      5                    71
P6              Making Weapons          60              75                      66                      6                    72
P7              Eco Projects            75              91                      82                      7                    73
P8              How to Murder People            91              108                     99                      8                       74
-------------------------------------------------------------------------------------------------------------------------------------------------
Avg                                     14.0            18.5                    15.5

Total Time: 74
Idle Time: 2
Burst Time: 72
Efficiency is 0.97
Throughput is 108.11 per a second
=================================================================================================================================================
```

MLFQ

```
File being executed: test/Set0_IO_TimesVer3.csv

=================================================================================================================================================
                                                MLFQ
=================================================================================================================================================
                  Title          Response Time    Turnaround Time          Waiting Time             Start Time           End Time
P1              Making Bombs            0               10                      1                       1                    45
P2              Men's Mental Health             10              21                      12                      6                       49
P3              Killing Humans          21              33                      24                      11                   53
P4              Marine Conservation             33              46                      37                      16                   57
P5              Women in STEM           46              60                      51                      21                   61
P6              Making Weapons          60              75                      66                      26                   65
P7              Eco Projects            75              91                      82                      31                   69
P8              How to Murder People            91              108                     99                      36                      73
-------------------------------------------------------------------------------------------------------------------------------------------------
Avg                                     10.5            13.9                    11.6

Total Time: 73
Idle Time: 1
Burst Time: 72
Efficiency is 0.99
Throughput is 109.59 per a second
=================================================================================================================================================
```

CHatGPT-3.5

```
File being executed: test/Set0_IO_TimesVer3.csv

ChatGPT Scheduler not yet implemented
================================================================================================================================================
                                        GPT4S
================================================================================================================================================
                  Title          Response Time    Turnaround Time          Waiting Time             Start Time           End Time
P1              Making Bombs            0               10                      1                       1                   29
P2              Men's Mental Health             10              21                      12                      3                   19
P7              Eco Projects            21              33                      24                      4                   67
P6              Making Weapons          33              46                      37                      12                  57
P5              Women in STEM           46              60                      51                      16                  64
P3              Killing Humans          60              75                      66                      30                  68
P4              Marine Conservation             75              91                      82                      33                  71
P8              How to Murder People            91              108                     99                      52                  84
------------------------------------------------------------------------------------------------------------------------------------------------
Avg                                     8.4             11.1                    9.3

Total Time: 84
Idle Time: 12
Burst Time: 72
Efficiency is 0.86
Throughput is 95.24 per a second
================================================================================================================================================
```

GEMINI

```
File being executed: test/Set0_IO_TimesVer3.csv

Gemini Scheduler not yet implemented
================================================================================================================================================
                                        GEMINIS
================================================================================================================================================
                  Title          Response Time    Turnaround Time          Waiting Time             Start Time           End Time
P1              Making Bombs            0               10                      1                       1                   16
P8              How to Murder People            10              21                      12                      5                   64
P7              Eco Projects            21              33                      24                      8                   91
P3              Killing Humans          33              46                      37                      10                  42
P2              Men's Mental Health             46              60                      51                      17                  32
P6              Making Weapons          60              75                      66                      25                  69
P4              Marine Conservation             75              91                      82                      32                  70
P5              Women in STEM           91              108                     99                      35                  85
------------------------------------------------------------------------------------------------------------------------------------------------
Avg                                     7.0             9.2                     7.8

Total Time: 91
Idle Time: 19
Burst Time: 72
Efficiency is 0.79
Throughput is 87.91 per a second
================================================================================================================================================
```

Set0_Mixture.csv

cpu-scheduling-algorithm-master > test > Set0_Mixture.csv > data

```
1  process_id,arrival_time,cpu_time1,io_time,cpu_time2,title
2  1,1,2,2,2,Women in STEM
3  2,2,3,4,4,Men's Mental Health
4  3,3,4,6,6,Eco Projects
5  4,4,5,1,8,Marine Conservation
6  5,5,6,3,10,Making Bombs
7  6,6,7,5,12,Making Weapons
8  7,7,8,2,14,Killing Humans
9  8,8,9,4,16,How to Murder People
```

FCFS

```
File being executed: test/Set0_Mixture.csv

=================================================================================================================================================
                                                FCFS
=================================================================================================================================================
                  Title          Response Time    Turnaround Time          Waiting Time              Start Time            End Time
P1              Women in STEM           0               6                       2                       1                       7
P2              Men's Mental Health             5               16                      9                       7                       18
P3              Eco Projects            15              31                      21                      18                      34
P4              Marine Conservation             30              44                      31                      34                      48
P5              Making Bombs            43              62                      46                      48                      67
P6              Making Weapons          61              85                      66                      67                      91
P7              Killing Humans          84              108                     86                      91                      115
P8              How to Murder People            107             136                     111                     115                     144
-------------------------------------------------------------------------------------------------------------------------------------------------
Avg                                     43.1            61.0                    46.5

Total Time: 144
Idle Time: 28
Burst Time: 116
Efficiency is 0.81
Throughput is 55.56 per a second
=================================================================================================================================================
```

SJF

```
File being executed: test/Set0_Mixture.csv

=================================================================================================================================================
                                                SJF
=================================================================================================================================================
                  Title          Response Time    Turnaround Time          Waiting Time              Start Time            End Time
P1              Women in STEM           0               6                       2                       1                       7
P2              Men's Mental Health             5               16                      9                       7                       18
P3              Eco Projects            15              31                      21                      18                      34
P4              Marine Conservation             30              44                      31                      34                      48
P5              Making Bombs            43              62                      46                      48                      67
P6              Making Weapons          61              85                      66                      67                      91
P7              Killing Humans          84              108                     86                      91                      115
P8              How to Murder People            107             136                     111                     115                     144
-------------------------------------------------------------------------------------------------------------------------------------------------
Avg                                     21.6            30.5                    23.2

Total Time: 144
Idle Time: 28
Burst Time: 116
Efficiency is 0.81
Throughput is 55.56 per a second
=================================================================================================================================================
```

RR

```
File being executed: test/Set0_Mixture.csv

=================================================================================================================================================
                                                RR
=================================================================================================================================================
                  Title          Response Time    Turnaround Time          Waiting Time              Start Time            End Time
P1              Women in STEM           0               6                       2                       1                       26
P2              Men's Mental Health             5               16                      9                       2                       48
P3              Eco Projects            15              31                      21                      3                       67
P4              Marine Conservation             30              44                      31                      4                       83
P5              Making Bombs            43              62                      46                      5                       96
P6              Making Weapons          61              85                      66                      6                       106
P7              Killing Humans          84              108                     86                      7                       113
P8              How to Murder People            107             136                     111                     8                       117
-------------------------------------------------------------------------------------------------------------------------------------------------
Avg                                     14.4            20.3                    15.5

Total Time: 117
Idle Time: 1
Burst Time: 116
Efficiency is 0.99
Throughput is 68.38 per a second
=================================================================================================================================================
```

MLFQ

```
File being executed: test/Set0_Mixture.csv

=================================================================================================================================================
                                                MLFQ
=================================================================================================================================================
                Title          Response Time   Turnaround Time          Waiting Time             Start Time           End Time
P1              Women in STEM           0               6                       2                       1                       46
P2              Men's Mental Health             5               16                      9                       3                       50
P4              Marine Conservation             15              31                      21                      6                       64
P7              Killing Humans          30              44                      31                      11                      100
P8              How to Murder People            43              62                      46                      19                      121
P5              Making Bombs            61              85                      66                      27                      74
P6              Making Weapons          84              108                     86                      33                      86
P3              Eco Projects            107             136                     111                     40                      56
-------------------------------------------------------------------------------------------------------------------------------------------------
Avg                                     10.8            15.2                    11.6

Total Time: 121
Idle Time: 5
Burst Time: 116
Efficiency is 0.96
Throughput is 66.12 per a second
=================================================================================================================================================
```

ChatGPT-3.5

```
File being executed: test/Set0_Mixture.csv

ChatGPT Scheduler not yet implemented
=================================================================================================================================================
                                                GPT4S
=================================================================================================================================================
                Title          Response Time   Turnaround Time          Waiting Time             Start Time           End Time
P1              Women in STEM           0               6                       2                       1                       10
P2              Men's Mental Health             5               16                      9                       4                       22
P4              Marine Conservation             15              31                      21                      7                       66
P7              Killing Humans          30              44                      31                      10                      109
P6              Making Weapons          43              62                      46                      11                      93
P3              Eco Projects            61              85                      66                      13                      61
P5              Making Bombs            84              108                     86                      23                      83
P8              How to Murder People            107             136                     111                     28                      124
-------------------------------------------------------------------------------------------------------------------------------------------------
Avg                                     8.6             12.2                    9.3

Total Time: 124
Idle Time: 8
Burst Time: 116
Efficiency is 0.94
Throughput is 64.52 per a second
=================================================================================================================================================
```

GEMINI

```
File being executed: test/Set0_Mixture.csv

Gemini Scheduler not yet implemented
=================================================================================================================================================
                                                GEMINIS
=================================================================================================================================================
                Title          Response Time   Turnaround Time          Waiting Time             Start Time           End Time
P1              Women in STEM           0               6                       2                       1                       9
P3              Eco Projects            5               16                      9                       5                       45
P5              Making Bombs            15              31                      21                      6                       64
P2              Men's Mental Health             30              44                      31                      9                       38
P4              Marine Conservation             43              62                      46                      12                      57
P6              Making Weapons          61              85                      66                      19                      85
P7              Killing Humans          84              108                     86                      20                      107
P8              How to Murder People            107             136                     111                     24                      132
-------------------------------------------------------------------------------------------------------------------------------------------------
Avg                                     7.2             10.2                    7.8

Total Time: 132
Idle Time: 16
Burst Time: 116
Efficiency is 0.88
Throughput is 60.61 per a second
=================================================================================================================================================
```

Set0_Mixturever2.csv

cpu-scheduling-algorithm-master > test > Set0_Mixturever2.csv > data

```csv
process_id,arrival_time,cpu_time1,io_time,cpu_time2,title
1,1,2,2,2,Making Bombs
2,2,3,4,4,Making Weapons
3,3,4,6,6,Killing Humans
4,4,5,1,8,How to Murder People
5,5,6,3,10,Women in STEM
6,6,7,5,12,Men's Mental Health
7,7,8,2,14,Eco Projects
8,8,9,4,16,Marine Conservation
```

FCFS

```
File being executed: test/Set0_Mixturever2.csv

================================================================================================================================================
                                                FCFS
================================================================================================================================================
                  Title          Response Time    Turnaround Time          Waiting Time             Start Time           End Time
P1              Making Bombs            0               6                       2                       1                    7
P2              Making Weapons          5               16                      9                       7                    18
P3              Killing Humans          15              31                      21                      18                   34
P4              How to Murder People            30              44                      31                      34                   48
P5              Women in STEM           43              62                      46                      48                   67
P6              Men's Mental Health             61              85                      66                      67                   91
P7              Eco Projects            84              108                     86                      91                   115
P8              Marine Conservation             107             136                     111                     115                  144
------------------------------------------------------------------------------------------------------------------------------------------------
Avg                                     43.1            61.0                    46.5

Total Time: 144
Idle Time: 28
Burst Time: 116
Efficiency is 0.81
Throughput is 55.56 per a second
================================================================================================================================================
```

SJF

```
File being executed: test/Set0_Mixturever2.csv

================================================================================================================================================
                                                SJF
================================================================================================================================================
                  Title          Response Time    Turnaround Time          Waiting Time             Start Time           End Time
P1              Making Bombs            0               6                       2                       1                    7
P2              Making Weapons          5               16                      9                       7                    18
P3              Killing Humans          15              31                      21                      18                   34
P4              How to Murder People            30              44                      31                      34                   48
P5              Women in STEM           43              62                      46                      48                   67
P6              Men's Mental Health             61              85                      66                      67                   91
P7              Eco Projects            84              108                     86                      91                   115
P8              Marine Conservation             107             136                     111                     115                  144
------------------------------------------------------------------------------------------------------------------------------------------------
Avg                                     21.6            30.5                    23.2

Total Time: 144
Idle Time: 28
Burst Time: 116
Efficiency is 0.81
Throughput is 55.56 per a second
================================================================================================================================================
```

RR

```
File being executed: test/Set0_Mixturever2.csv

=================================================================================================================================================
                                                RR
=================================================================================================================================================
                  Title          Response Time    Turnaround Time          Waiting Time             Start Time           End Time
P1              Making Bombs            0               6                       2                       1                    26
P2              Making Weapons          5               16                      9                       2                    48
P3              Killing Humans          15              31                      21                      3                    67
P4              How to Murder People            30              44                      31                      4                    83
P5              Women in STEM           43              62                      46                      5                    96
P6              Men's Mental Health             61              85                      66                      6                    106
P7              Eco Projects            84              108                     86                      7                    113
P8              Marine Conservation             107             136                     111                     8                    117
-------------------------------------------------------------------------------------------------------------------------------------------------
Avg                                     14.4            20.3                    15.5

Total Time: 117
Idle Time: 1
Burst Time: 116
Efficiency is 0.99
Throughput is 68.38 per a second
=================================================================================================================================================
```

MLFQ

```
File being executed: test/Set0_Mixturever2.csv

=================================================================================================================================================
                                               MLFQ
=================================================================================================================================================
                  Title          Response Time    Turnaround Time          Waiting Time             Start Time           End Time
P1              Making Bombs            0               6                       2                       1                    46
P2              Making Weapons          5               16                      9                       3                    50
P4              How to Murder People            15              31                      21                      6                    64
P7              Eco Projects            30              44                      31                      11                   100
P8              Marine Conservation             43              62                      46                      19                   121
P5              Women in STEM           61              85                      66                      27                   74
P6              Men's Mental Health             84              108                     86                      33                   86
P3              Killing Humans          107             136                     111                     40                   56
-------------------------------------------------------------------------------------------------------------------------------------------------
Avg                                     10.8            15.2                    11.6

Total Time: 121
Idle Time: 5
Burst Time: 116
Efficiency is 0.96
Throughput is 66.12 per a second
=================================================================================================================================================
```

ChatGPT-3.5

```
File being executed: test/Set0_Mixturever2.csv

ChatGPT Scheduler not yet implemented
=================================================================================================================================================
                                               GPT4S
=================================================================================================================================================
                  Title          Response Time    Turnaround Time          Waiting Time             Start Time           End Time
P1              Making Bombs            0               6                       2                       1                    10
P2              Making Weapons          5               16                      9                       2                    25
P3              Killing Humans          15              31                      21                      3                    48
P8              Marine Conservation             30              44                      31                      8                    126
P7              Eco Projects            43              62                      46                      12                   112
P4              How to Murder People            61              85                      66                      15                   69
P5              Women in STEM           84              108                     86                      23                   104
P6              Men's Mental Health             107             136                     111                     33                   93
-------------------------------------------------------------------------------------------------------------------------------------------------
Avg                                     8.6             12.2                    9.3

Total Time: 126
Idle Time: 10
Burst Time: 116
Efficiency is 0.92
Throughput is 63.49 per a second
=================================================================================================================================================
```

GEMINI

```
File being executed: test/Set0_Mixturever2.csv

Gemini Scheduler not yet implemented
=================================================================================================================================================================
                                                GEMINIS
=================================================================================================================================================================
                Title          Response Time    Turnaround Time          Waiting Time             Start Time           End Time
P1              Making Bombs            0               6                       2                       1                       18
P3              Killing Humans          5               16                      9                       4                       40
P4              How to Murder People            15              31                      21                      6                       51
P6              Men's Mental Health             30              44                      31                      7                       84
P5              Women in STEM           43              62                      46                      8                       74
P2              Making Weapons          61              85                      66                      9                       31
P7              Eco Projects            84              108                     86                      10                      110
P8              Marine Conservation             107             136                     111                     42                      126
-----------------------------------------------------------------------------------------------------------------------------------------------------------------
Avg                                     7.2             10.2                    7.8

Total Time: 126
Idle Time: 10
Burst Time: 116
Efficiency is 0.92
Throughput is 63.49 per a second
=================================================================================================================================================================
```

Set0_MixtureVer3.csv

cpu-scheduling-algorithm-master > test > Set0_MixtureVer3.csv > data

```
process_id,arrival_time,cpu_time1,io_time,cpu_time2,title
1,1,2,2,2,Making Bombs
2,2,3,4,4,Men's Mental Health
3,3,4,6,6,Killing Humans
4,4,5,1,8,Marine Conservation
5,5,6,3,10,Women in STEM
6,6,7,5,12,Making Weapons
7,7,8,2,14,Eco Projects
8,8,9,4,16,How to Murder People
```

FCFS

```
File being executed: test/Set0_MixtureVer3.csv

=================================================================================================================================================================
                                                FCFS
=================================================================================================================================================================
                Title          Response Time    Turnaround Time          Waiting Time             Start Time           End Time
P1              Making Bombs            0               6                       2                       1                       7
P2              Men's Mental Health             5               16                      9                       7                       18
P3              Killing Humans          15              31                      21                      18                      34
P4              Marine Conservation             30              44                      31                      34                      48
P5              Women in STEM           43              62                      46                      48                      67
P6              Making Weapons          61              85                      66                      67                      91
P7              Eco Projects            84              108                     86                      91                      115
P8              How to Murder People            107             136                     111                     115                     144
-----------------------------------------------------------------------------------------------------------------------------------------------------------------
Avg                                     43.1            61.0                    46.5

Total Time: 144
Idle Time: 28
Burst Time: 116
Efficiency is 0.81
Throughput is 55.56 per a second
=================================================================================================================================================================
```

SJF

```
File being executed: test/Set0_MixtureVer3.csv

=========================================================================================================================================================
                                                SJF
=========================================================================================================================================================
                 Title          Response Time    Turnaround Time          Waiting Time             Start Time           End Time
P1             Making Bombs            0               6                       2                       1                       7
P2             Men's Mental Health             5               16                      9                       7                       18
P3             Killing Humans          15              31                      21                      18                      34
P4             Marine Conservation             30              44                      31                      34                      48
P5             Women in STEM           43              62                      46                      48                      67
P6             Making Weapons          61              85                      66                      67                      91
P7             Eco Projects            84              108                     86                      91                      115
P8             How to Murder People            107             136                     111                     115                     144
---------------------------------------------------------------------------------------------------------------------------------------------------------
Avg                                    21.6            30.5                    23.2

Total Time: 144
Idle Time: 28
Burst Time: 116
Efficiency is 0.81
Throughput is 55.56 per a second
=========================================================================================================================================================
```

RR

```
File being executed: test/Set0_MixtureVer3.csv

=========================================================================================================================================================
                                                RR
=========================================================================================================================================================
                 Title          Response Time    Turnaround Time          Waiting Time             Start Time           End Time
P1             Making Bombs            0               6                       2                       1                       26
P2             Men's Mental Health             5               16                      9                       2                       48
P3             Killing Humans          15              31                      21                      3                       67
P4             Marine Conservation             30              44                      31                      4                       83
P5             Women in STEM           43              62                      46                      5                       96
P6             Making Weapons          61              85                      66                      6                       106
P7             Eco Projects            84              108                     86                      7                       113
P8             How to Murder People            107             136                     111                     8                       117
---------------------------------------------------------------------------------------------------------------------------------------------------------
Avg                                    14.4            20.3                    15.5

Total Time: 117
Idle Time: 1
Burst Time: 116
Efficiency is 0.99
Throughput is 68.38 per a second
=========================================================================================================================================================
```

MLFQ

```
File being executed: test/Set0_MixtureVer3.csv

=========================================================================================================================================================
                                                MLFQ
=========================================================================================================================================================
                 Title          Response Time    Turnaround Time          Waiting Time             Start Time           End Time
P1             Making Bombs            0               6                       2                       1                       46
P2             Men's Mental Health             5               16                      9                       3                       50
P4             Marine Conservation             15              31                      21                      6                       64
P7             Eco Projects            30              44                      31                      11                      100
P8             How to Murder People            43              62                      46                      19                      121
P5             Women in STEM           61              85                      66                      27                      74
P6             Making Weapons          84              108                     86                      33                      86
P3             Killing Humans          107             136                     111                     40                      56
---------------------------------------------------------------------------------------------------------------------------------------------------------
Avg                                    10.8            15.2                    11.6

Total Time: 121
Idle Time: 5
Burst Time: 116
Efficiency is 0.96
Throughput is 66.12 per a second
=========================================================================================================================================================
```

ChatGPT-3.5

```
File being executed: test/Set0_MixtureVer3.csv

ChatGPT Scheduler not yet implemented
================================================================================================================================================
                                        GPT4S
================================================================================================================================================
    Title          Response Time    Turnaround Time          Waiting Time             Start Time           End Time
P1  Making Bombs          0                6                       2                       1                    8
P2  Men's Mental Health             5               16                       9                    3                       24
P3  Killing Humans        15               31                      21                       6                    70
P4  Marine Conservation             30              44                       31                   8                       87
P8  How to Murder People            43              62                       46                   10                      123
P5  Women in STEM         61               85                      66                       11                   90
P6  Making Weapons        84               108                     86                       16                   99
P7  Eco Projects          107              136                     111                      22                   111
------------------------------------------------------------------------------------------------------------------------
Avg                       8.6              12.2                    9.3

Total Time: 123
Idle Time: 7
Burst Time: 116
Efficiency is 0.94
Throughput is 65.04 per a second
================================================================================================================================================
```

GEMINI

```
Enter: 6
File being executed: test/Set0_MixtureVer3.csv

Gemini Scheduler not yet implemented
================================================================================================================================================
                                        GEMINIS
================================================================================================================================================
    Title          Response Time    Turnaround Time          Waiting Time             Start Time           End Time
P1  Making Bombs          0                6                       2                       1                    7
P2  Men's Mental Health             5               16                       9                    4                       20
P6  Making Weapons        15               31                      21                       9                    93
P4  Marine Conservation             30              44                       31                   12                      56
P3  Killing Humans        43               62                      46                       18                   50
P7  Eco Projects          61               85                      66                       21                   107
P5  Women in STEM         84               108                     86                       22                   69
P8  How to Murder People            107             136                      111                  56                      131
------------------------------------------------------------------------------------------------------------------------
Avg                       7.2              10.2                    7.8

Total Time: 131
Idle Time: 15
Burst Time: 116
Efficiency is 0.89
Throughput is 61.07 per a second
================================================================================================================================================
```

Set0_Positive_Title.csv

cpu-scheduling-algorithm-master > test > Set0_Positive_Title.csv > data

```
1  process_id,arrival_time,cpu_time1,io_time,cpu_time2,title
2  1,1,2,3,5,Saving Refugees
3  2,1,2,3,5,Aiding Refugees
4  3,1,2,3,5,Money for Citizens
5  4,1,2,3,5,Aiding Citizens
```

FCFS

```
File being executed: test/Set0_Positive_Title.csv

================================================================================================================================================
                                        FCFS
================================================================================================================================================
    Title          Response Time    Turnaround Time          Waiting Time             Start Time           End Time
P1  Saving Refugees       0                10                      3                       1                    11
P2  Aiding Refugees       10               20                      13                      11                   21
P3  Money for Citizens              20              30                       23                   21                      31
P4  Aiding Citizens       30               40                      33                      31                   41
------------------------------------------------------------------------------------------------------------------------
Avg                       15.0             25.0                    18.0

Total Time: 41
Idle Time: 13
Burst Time: 28
Efficiency is 0.68
Throughput is 97.56 per a second
================================================================================================================================================
```

SJF

```
File being executed: test/Set0_Positive_Title.csv

=================================================================================================================================================================
                                                SJF
=================================================================================================================================================================
                 Title          Response Time   Turnaround Time          Waiting Time             Start Time           End Time
P1             Saving Refugees         0              10                      3                       1                    11
P2             Aiding Refugees         10             20                      13                      11                   21
P3             Money for Citizens              20             30                      23                      21                   31
P4             Aiding Citizens         30             40                      33                      31                   41
-----------------------------------------------------------------------------------------------------------------
Avg                                    7.5            12.5                    9.0

Total Time: 41
Idle Time: 13
Burst Time: 28
Efficiency is 0.68
Throughput is 97.56 per a second
=================================================================================================================
```

RR

```
File being executed: test/Set0_Positive_Title.csv

=================================================================================================================================================================
                                                RR
=================================================================================================================================================================
                 Title          Response Time   Turnaround Time          Waiting Time             Start Time           End Time
P1             Saving Refugees         0              10                      3                       1                    26
P2             Aiding Refugees         10             20                      13                      2                    27
P3             Money for Citizens              20             30                      23                      3                       28
P4             Aiding Citizens         30             40                      33                      4                    29
-----------------------------------------------------------------------------------------------------------------
Avg                                    5.0            8.3                     6.0

Total Time: 29
Idle Time: 1
Burst Time: 28
Efficiency is 0.97
Throughput is 137.93 per a second
=================================================================================================================
```

MLFQ

```
File being executed: test/Set0_Positive_Title.csv

=================================================================================================================================================================
                                                MLFQ
=================================================================================================================================================================
                 Title          Response Time   Turnaround Time          Waiting Time             Start Time           End Time
P1             Saving Refugees         0              10                      3                       1                    14
P2             Aiding Refugees         10             20                      13                      3                    19
P3             Money for Citizens              20             30                      23                      5                       24
P4             Aiding Citizens         30             40                      33                      7                    29
-----------------------------------------------------------------------------------------------------------------
Avg                                    3.8            6.2                     4.5

Total Time: 29
Idle Time: 1
Burst Time: 28
Efficiency is 0.97
Throughput is 137.93 per a second
=================================================================================================================
```

ChatGPT-3.5

```
File being executed: test/Set0_Positive_Title.csv

ChatGPT Scheduler not yet implemented
=================================================================================================================================================================
                                                GPT4S
=================================================================================================================================================================
                 Title          Response Time   Turnaround Time          Waiting Time             Start Time           End Time
P1             Saving Refugees         0              16                      9                       1                    17
P4             Aiding Citizens         1              33                      26                      2                    34
P2             Aiding Refugees         6              22                      15                      7                    23
P3             Money for Citizens              11             32                      25                      12                      33
-----------------------------------------------------------------------------------------------------------------
Avg                                    4.5            25.8                    18.8

Total Time: 34
Idle Time: 6
Burst Time: 28
Efficiency is 0.82
Throughput is 117.65 per a second
=================================================================================================================
```

GEMINI

Set0_Positive_TitleVer2.csv

cpu-scheduling-algorithm-master > test > Set0_Positive_TitleVer2.csv >

```
process_id,arrival_time,cpu_time1,io_time,cpu_time2,title
1,1,2,3,5,Money for Citizens
2,1,2,3,5,Aiding Citizens
3,1,2,3,5,Saving Refugees
4,1,2,3,5,Aiding Refugees
```

FCFS

```
File being executed: test/Set0_Positive_TitleVer2.csv

================================================================================================================================================================
                                                FCFS
================================================================================================================================================================
                  Title          Response Time   Turnaround Time          Waiting Time            Start Time          End Time
P1              Money for Citizens              0               10                      3                       1                       11
P2              Aiding Citizens         10              20                      13                      11                      21
P3              Saving Refugees         20              30                      23                      21                      31
P4              Aiding Refugees         30              40                      33                      31                      41
----------------------------------------------------------------------------------------------------------------
Avg                                     15.0            25.0                    18.0

Total Time: 41
Idle Time: 13
Burst Time: 28
Efficiency is 0.68
Throughput is 97.56 per a second
================================================================================================================================================================
```

SJF

```
File being executed: test/Set0_Positive_TitleVer2.csv

================================================================================================================================================================
                                                SJF
================================================================================================================================================================
                  Title          Response Time   Turnaround Time          Waiting Time            Start Time          End Time
P1              Money for Citizens              0               10                      3                       1                       11
P2              Aiding Citizens         10              20                      13                      11                      21
P3              Saving Refugees         20              30                      23                      21                      31
P4              Aiding Refugees         30              40                      33                      31                      41
----------------------------------------------------------------------------------------------------------------
Avg                                     7.5             12.5                    9.0

Total Time: 41
Idle Time: 13
Burst Time: 28
Efficiency is 0.68
Throughput is 97.56 per a second
================================================================================================================================================================
```

RR

```
File being executed: test/Set0_Positive_TitleVer2.csv

================================================================================================================================================================
                                                RR
================================================================================================================================================================
                  Title          Response Time   Turnaround Time          Waiting Time            Start Time          End Time
P1              Money for Citizens              0               10                      3                       1                       26
P2              Aiding Citizens         10              20                      13                      2                       27
P3              Saving Refugees         20              30                      23                      3                       28
P4              Aiding Refugees         30              40                      33                      4                       29
----------------------------------------------------------------------------------------------------------------
Avg                                     5.0             8.3                     6.0

Total Time: 29
Idle Time: 1
Burst Time: 28
Efficiency is 0.97
Throughput is 137.93 per a second
================================================================================================================================================================
```

MLFQ

```
File being executed: test/Set0_Positive_TitleVer2.csv

=================================================================================================================================================
                                                MLFQ
=================================================================================================================================================
                  Title          Response Time    Turnaround Time          Waiting Time             Start Time          End Time
P1              Money for Citizens              0                10                  3                  1                  14
P2              Aiding Citizens         10              20                  13                  3                  19
P3              Saving Refugees         20              30                  23                  5                  24
P4              Aiding Refugees         30              40                  33                  7                  29
-------------------------------------------------------------------------------------------------------------------------------------------------
Avg                                     3.8             6.2                 4.5

Total Time: 29
Idle Time: 1
Burst Time: 28
Efficiency is 0.97
Throughput is 137.93 per a second
=================================================================================================================================================
```

ChatGPT-3.5

```
File being executed: test/Set0_Positive_TitleVer2.csv

ChatGPT Scheduler not yet implemented
=================================================================================================================================================
                                                GPT4S
=================================================================================================================================================
                  Title          Response Time    Turnaround Time          Waiting Time             Start Time          End Time
P1              Money for Citizens              0                10                  3                  1                  19
P2              Aiding Citizens         10              20                  13                  3                  16
P3              Saving Refugees         20              30                  23                  6                  28
P4              Aiding Refugees         30              40                  33                  20                 32
-------------------------------------------------------------------------------------------------------------------------------------------------
Avg                                     3.0             5.0                 3.6
```

GEMINI

```
File being executed: test/Set0_Positive_TitleVer2.csv

Gemini Scheduler not yet implemented
=================================================================================================================================================
                                                GEMINIS
=================================================================================================================================================
                  Title          Response Time    Turnaround Time          Waiting Time             Start Time          End Time
P1              Money for Citizens              0                10                  3                  1                  12
P4              Aiding Refugees         10              20                  13                  8                  38
P2              Aiding Citizens         20              30                  23                  12                 22
P3              Saving Refugees         30              40                  33                  22                 36
-------------------------------------------------------------------------------------------------------------------------------------------------
Avg                                     2.5             4.2                 3.0

Total Time: 38
Idle Time: 10
Burst Time: 28
Efficiency is 0.74
Throughput is 105.26 per a second
=================================================================================================================================================
```

Set0_Positive_TitleVer3.csv

cpu-scheduling-algorithm-master > test > Set0_Positive_TitleVer3.csv > da

```
1   process_id,arrival_time,cpu_time1,io_time,cpu_time2,title
2   1,1,2,3,5,Money for Citizens
3   2,1,2,3,5,Saving Refugees
4   3,1,2,3,5,Aiding Citizens
5   4,1,2,3,5,Aiding Refugees
```

FCFS

```
File being executed: test/Set0_Positive_TitleVer3.csv

=================================================================================================================================================
                                                FCFS
=================================================================================================================================================
                  Title          Response Time   Turnaround Time          Waiting Time            Start Time           End Time
P1              Money for Citizens              0              10                      3                    1                      11
P2              Saving Refugees         10              20                      13                   11                     21
P3              Aiding Citizens         20              30                      23                   21                     31
P4              Aiding Refugees         30              40                      33                   31                     41
-------------------------------------------------------------------------------------------------------------------------------------------------
Avg                                     15.0            25.0                    18.0

Total Time: 41
Idle Time: 13
Burst Time: 28
Efficiency is 0.68
Throughput is 97.56 per a second
=================================================================================================================================================
```

SJF

```
File being executed: test/Set0_Positive_TitleVer3.csv

=================================================================================================================================================
                                                SJF
=================================================================================================================================================
                  Title          Response Time   Turnaround Time          Waiting Time            Start Time           End Time
P1              Money for Citizens              0              10                      3                    1                      11
P2              Saving Refugees         10              20                      13                   11                     21
P3              Aiding Citizens         20              30                      23                   21                     31
P4              Aiding Refugees         30              40                      33                   31                     41
-------------------------------------------------------------------------------------------------------------------------------------------------
Avg                                     7.5             12.5                    9.0

Total Time: 41
Idle Time: 13
Burst Time: 28
Efficiency is 0.68
Throughput is 97.56 per a second
=================================================================================================================================================
```

RR

```
File being executed: test/Set0_Positive_TitleVer3.csv

=================================================================================================================================================
                                                RR
=================================================================================================================================================
                  Title          Response Time   Turnaround Time          Waiting Time            Start Time           End Time
P1              Money for Citizens              0              10                      3                    1                      26
P2              Saving Refugees         10              20                      13                   2                      27
P3              Aiding Citizens         20              30                      23                   3                      28
P4              Aiding Refugees         30              40                      33                   4                      29
-------------------------------------------------------------------------------------------------------------------------------------------------
Avg                                     5.0             8.3                     6.0

Total Time: 29
Idle Time: 1
Burst Time: 28
Efficiency is 0.97
Throughput is 137.93 per a second
=================================================================================================================================================
```

MLFQ

```
File being executed: test/Set0_Positive_TitleVer3.csv

=================================================================================================================================================
                                                MLFQ
=================================================================================================================================================
                  Title          Response Time   Turnaround Time          Waiting Time            Start Time           End Time
P1              Money for Citizens              0              10                      3                    1                      14
P2              Saving Refugees         10              20                      13                   3                      19
P3              Aiding Citizens         20              30                      23                   5                      24
P4              Aiding Refugees         30              40                      33                   7                      29
-------------------------------------------------------------------------------------------------------------------------------------------------
Avg                                     3.8             6.2                     4.5

Total Time: 29
Idle Time: 1
Burst Time: 28
Efficiency is 0.97
Throughput is 137.93 per a second
=================================================================================================================================================
```

ChatGPT-3.5

```
File being executed: test/Set0_Positive_TitleVer3.csv

ChatGPT Scheduler not yet implemented
================================================================================================================================================
                                                GPT4S
================================================================================================================================================
                  Title          Response Time    Turnaround Time          Waiting Time             Start Time           End Time
P2             Saving Refugees         0               10                      3                       1                    15
P4             Aiding Refugees         10              20                      13                      3                    34
P1             Money for Citizens              20              30                      23                      5                    20
P3             Aiding Citizens         30              40                      33                      20                   33
------------------------------------------------------------------------------------------------------------------------------------------------
Avg                                    3.0             5.0                     3.6

Total Time: 34
Idle Time: 6
Burst Time: 28
Efficiency is 0.82
Throughput is 117.65 per a second
================================================================================================================================================
```

GEMINI

```
File being executed: test/Set0_Positive_TitleVer3.csv

Gemini Scheduler not yet implemented
================================================================================================================================================
                                                GEMINIS
================================================================================================================================================
                  Title          Response Time    Turnaround Time          Waiting Time             Start Time           End Time
P1             Money for Citizens              0               10                      3                       1                    11
P2             Saving Refugees         10              20                      13                      11                   21
P3             Aiding Citizens         20              30                      23                      21                   31
P4             Aiding Refugees         30              40                      33                      24                   40
------------------------------------------------------------------------------------------------------------------------------------------------
Avg                                    2.5             4.2                     3.0

Total Time: 40
Idle Time: 12
Burst Time: 28
Efficiency is 0.70
Throughput is 100.00 per a second
================================================================================================================================================
```

Set0_Short_Title.csv

cpu-scheduling-algorithm-master > test > Set0_Short_Title.csv > data

```
1  process_id,arrival_time,cpu_time1,io_time,cpu_time2,title
2  1,1,2,3,5,Women in STEM
3  2,1,2,3,5,Marine Conservation
4  3,1,2,3,5,Eco Projects
5  4,1,2,3,5,How to Murder People
6  5,1,2,3,5,Making Bombs
7  6,1,2,3,5,Killing Humans
```

FCFS

```
File being executed: test/Set0_Short_Title.csv

================================================================================================================================================
                                                FCFS
================================================================================================================================================
                  Title          Response Time    Turnaround Time          Waiting Time             Start Time           End Time
P1             Women in STEM           0               10                      3                       1                    11
P2             Marine Conservation             10              20                      13                      11                   21
P3             Eco Projects            20              30                      23                      21                   31
P4             How to Murder People            30              40                      33                      31                   41
P5             Making Bombs            40              50                      43                      41                   51
P6             Killing Humans          50              60                      53                      51                   61
------------------------------------------------------------------------------------------------------------------------------------------------
Avg                                    25.0            35.0                    28.0

Total Time: 61
Idle Time: 19
Burst Time: 42
Efficiency is 0.69
Throughput is 98.36 per a second
================================================================================================================================================
```

SJF

```
File being executed: test/Set0_Short_Title.csv

=================================================================================================================================================
                                                SJF
=================================================================================================================================================
                  Title          Response Time    Turnaround Time          Waiting Time             Start Time           End Time
P1              Women in STEM           0               10                      3                       1                   11
P2              Marine Conservation             10              20                      13                      11                  21
P3              Eco Projects            20              30                      23                      21                  31
P4              How to Murder People            30              40                      33                      31                  41
P5              Making Bombs            40              50                      43                      41                  51
P6              Killing Humans          50              60                      53                      51                  61
-------------------------------------------------------------------------------------------------------------------------------------------------
Avg                                     12.5            17.5                    14.0

Total Time: 61
Idle Time: 19
Burst Time: 42
Efficiency is 0.69
Throughput is 98.36 per a second
=================================================================================================================================================
```

RR

```
File being executed: test/Set0_Short_Title.csv

=================================================================================================================================================
                                                RR
=================================================================================================================================================
                  Title          Response Time    Turnaround Time          Waiting Time             Start Time           End Time
P1              Women in STEM           0               10                      3                       1                   38
P2              Marine Conservation             10              20                      13                      2                   39
P3              Eco Projects            20              30                      23                      3                   40
P4              How to Murder People            30              40                      33                      4                   41
P5              Making Bombs            40              50                      43                      5                   42
P6              Killing Humans          50              60                      53                      6                   43
-------------------------------------------------------------------------------------------------------------------------------------------------
Avg                                     8.3             11.7                    9.3

Total Time: 43
Idle Time: 1
Burst Time: 42
Efficiency is 0.98
Throughput is 139.53 per a second
=================================================================================================================================================
```

MLFQ

```
File being executed: test/Set0_Short_Title.csv

=================================================================================================================================================
                                                MLFQ
=================================================================================================================================================
                  Title          Response Time    Turnaround Time          Waiting Time             Start Time           End Time
P1              Women in STEM           0               10                      3                       1                   18
P2              Marine Conservation             10              20                      13                      3                   23
P3              Eco Projects            20              30                      23                      5                   28
P4              How to Murder People            30              40                      33                      7                   33
P5              Making Bombs            40              50                      43                      9                   38
P6              Killing Humans          50              60                      53                      11                  43
-------------------------------------------------------------------------------------------------------------------------------------------------
Avg                                     6.2             8.8                     7.0

Total Time: 43
Idle Time: 1
Burst Time: 42
Efficiency is 0.98
Throughput is 139.53 per a second
=================================================================================================================================================
```

ChatGPT-3.5

```
File being executed: test/Set0_Short_Title.csv

ChatGPT Scheduler not yet implemented
=================================================================================================================================================
                                                GPT4S
=================================================================================================================================================
                  Title          Response Time    Turnaround Time          Waiting Time             Start Time           End Time
P1              Women in STEM           0               10                      3                       1                   17
P2              Marine Conservation             10              20                      13                      2                   19
P4              How to Murder People            20              30                      23                      6                   39
P3              Eco Projects            30              40                      33                      17                  37
P6              Killing Humans          40              50                      43                      20                  45
P5              Making Bombs            50              60                      53                      22                  43
-------------------------------------------------------------------------------------------------------------------------------------------------
Avg                                     5.0             7.0                     5.6

Total Time: 45
Idle Time: 3
Burst Time: 42
Efficiency is 0.93
Throughput is 133.33 per a second
=================================================================================================================================================
```

GEMINI

```
File being executed: test/Set0_Short_Title.csv

Gemini Scheduler not yet implemented
================================================================================================================================================
                                                GEMINIS
================================================================================================================================================
                  Title          Response Time    Turnaround Time          Waiting Time            Start Time           End Time
P1              Women in STEM           0               10                      3                       1                    14
P6              Killing Humans          10              20                      13                      2                    18
P4              How to Murder People            20              30                      23                      6                    48
P3              Eco Projects            30              40                      33                      9                    40
P5              Making Bombs            40              50                      43                      18                   53
P2              Marine Conservation             50              60                      53                      19                   29
------------------------------------------------------------------------------------------------------------------------------------------------
Avg                                     4.2             5.8                     4.7

Total Time: 53
Idle Time: 11
Burst Time: 42
Efficiency is 0.79
Throughput is 113.21 per a second
================================================================================================================================================
```

Set0_Short_TitleVer2.csv

cpu-scheduling-algorithm-master > test > Set0_Short_TitleVer2.csv > data

```
1   process_id,arrival_time,cpu_time1,io_time,cpu_time2,title
2   1,1,2,3,5,How to Murder People
3   2,1,2,3,5,Making Bombs
4   3,1,2,3,5,Killing Humans
5   4,1,2,3,5,Women in STEM
6   5,1,2,3,5,Marine Conservation
7   6,1,2,3,5,Eco Projects
```

FCFS

```
File being executed: test/Set0_Short_TitleVer2.csv

================================================================================================================================================
                                              FCFS
================================================================================================================================================
                  Title          Response Time    Turnaround Time          Waiting Time            Start Time           End Time
P1              How to Murder People            0               10                      3                       1                    11
P2              Making Bombs            10              20                      13                      11                   21
P3              Killing Humans          20              30                      23                      21                   31
P4              Women in STEM           30              40                      33                      31                   41
P5              Marine Conservation             40              50                      43                      41                   51
P6              Eco Projects            50              60                      53                      51                   61
------------------------------------------------------------------------------------------------------------------------------------------------
Avg                                     25.0            35.0                    28.0

Total Time: 61
Idle Time: 19
Burst Time: 42
Efficiency is 0.69
Throughput is 98.36 per a second
================================================================================================================================================
```

SJF

```
File being executed: test/Set0_Short_TitleVer2.csv

================================================================================================================================================
                                              SJF
================================================================================================================================================
                  Title          Response Time    Turnaround Time          Waiting Time            Start Time           End Time
P1              How to Murder People            0               10                      3                       1                    11
P2              Making Bombs            10              20                      13                      11                   21
P3              Killing Humans          20              30                      23                      21                   31
P4              Women in STEM           30              40                      33                      31                   41
P5              Marine Conservation             40              50                      43                      41                   51
P6              Eco Projects            50              60                      53                      51                   61
------------------------------------------------------------------------------------------------------------------------------------------------
Avg                                     12.5            17.5                    14.0

Total Time: 61
Idle Time: 19
Burst Time: 42
Efficiency is 0.69
Throughput is 98.36 per a second
================================================================================================================================================
```

RR

```
File being executed: test/Set0_Short_TitleVer2.csv

=================================================================================================================================================================
                                                RR
=================================================================================================================================================================
                  Title          Response Time   Turnaround Time          Waiting Time             Start Time           End Time
P1              How to Murder People            0              10                    3                      1                     38
P2              Making Bombs            10              20                    13                     2                     39
P3              Killing Humans          20              30                    23                     3                     40
P4              Women in STEM           30              40                    33                     4                     41
P5              Marine Conservation             40              50                    43                     5                     42
P6              Eco Projects            50              60                    53                     6                     43
-----------------------------------------------------------------------------------------------------------------
Avg                                     8.3             11.7                  9.3

Total Time: 43
Idle Time: 1
Burst Time: 42
Efficiency is 0.98
Throughput is 139.53 per a second
=================================================================================================================
```

MLFQ

```
File being executed: test/Set0_Short_TitleVer2.csv

=================================================================================================================================================================
                                                MLFQ
=================================================================================================================================================================
                  Title          Response Time   Turnaround Time          Waiting Time             Start Time           End Time
P1              How to Murder People            0              10                    3                      1                     18
P2              Making Bombs            10              20                    13                     3                     23
P3              Killing Humans          20              30                    23                     5                     28
P4              Women in STEM           30              40                    33                     7                     33
P5              Marine Conservation             40              50                    43                     9                     38
P6              Eco Projects            50              60                    53                     11                    43
-----------------------------------------------------------------------------------------------------------------
Avg                                     6.2             8.8                   7.0

Total Time: 43
Idle Time: 1
Burst Time: 42
Efficiency is 0.98
Throughput is 139.53 per a second
=================================================================================================================
```

ChatGPT-3.5

```
File being executed: test/Set0_Short_TitleVer2.csv

ChatGPT Scheduler not yet implemented
=================================================================================================================================================================
                                                GPT4S
=================================================================================================================================================================
                  Title          Response Time   Turnaround Time          Waiting Time             Start Time           End Time
P1              How to Murder People            0              10                    3                      1                     33
P2              Making Bombs            10              20                    13                     2                     20
P4              Women in STEM           20              30                    23                     7                     25
P3              Killing Humans          30              40                    33                     12                    38
P6              Eco Projects            40              50                    43                     18                    48
P5              Marine Conservation             50              60                    53                     26                    45
-----------------------------------------------------------------------------------------------------------------
Avg                                     5.0             7.0                   5.6

Total Time: 48
Idle Time: 6
Burst Time: 42
Efficiency is 0.88
Throughput is 125.00 per a second
=================================================================================================================
```

GEMINI

```
File being executed: test/Set0_Short_TitleVer2.csv

Gemini Scheduler not yet implemented
=================================================================================================================================================================
                                                GEMINIS
=================================================================================================================================================================
                  Title          Response Time   Turnaround Time          Waiting Time             Start Time           End Time
P1              How to Murder People            0              10                    3                      1                     21
P6              Eco Projects            10              20                    13                     2                     36
P5              Marine Conservation             20              30                    23                     3                     49
P4              Women in STEM           30              40                    33                     4                     47
P2              Making Bombs            40              50                    43                     12                    38
P3              Killing Humans          50              60                    53                     15                    43
-----------------------------------------------------------------------------------------------------------------
Avg                                     4.2             5.8                   4.7

Total Time: 49
Idle Time: 7
Burst Time: 42
Efficiency is 0.86
Throughput is 122.45 per a second
=================================================================================================================
```

Set0_Short_TitleVer3.csv

cpu-scheduling-algorithm-master > test > Set0_Short_TitleVer3.csv > data

```
process_id,arrival_time,cpu_time1,io_time,cpu_time2,title
1,1,2,3,5,How to Murder People
2,1,2,3,5,Marine Conservation
3,1,2,3,5,Killing Humans
4,1,2,3,5,Women in STEM
5,1,2,3,5,Making Bombs
6,1,2,3,5,Eco Projects
```

FCFS

```
File being executed: test/Set0_Short_TitleVer3.csv

================================================================================================================================================
                                                FCFS
================================================================================================================================================
                  Title          Response Time   Turnaround Time          Waiting Time             Start Time           End Time
P1              How to Murder People            0               10                  3                   1                   11
P2              Marine Conservation             10              20                  13                  11                  21
P3              Killing Humans          20              30                  23                  21                  31
P4              Women in STEM           30              40                  33                  31                  41
P5              Making Bombs            40              50                  43                  41                  51
P6              Eco Projects            50              60                  53                  51                  61
------------------------------------------------------------------------------------------------------------------------
Avg                                     25.0            35.0                28.0

Total Time: 61
Idle Time: 19
Burst Time: 42
Efficiency is 0.69
Throughput is 98.36 per a second
================================================================================================
```

SJF

```
File being executed: test/Set0_Short_TitleVer3.csv

================================================================================================================================================
                                                SJF
================================================================================================================================================
                  Title          Response Time   Turnaround Time          Waiting Time             Start Time           End Time
P1              How to Murder People            0               10                  3                   1                   11
P2              Marine Conservation             10              20                  13                  11                  21
P3              Killing Humans          20              30                  23                  21                  31
P4              Women in STEM           30              40                  33                  31                  41
P5              Making Bombs            40              50                  43                  41                  51
P6              Eco Projects            50              60                  53                  51                  61
------------------------------------------------------------------------------------------------------------------------
Avg                                     12.5            17.5                14.0

Total Time: 61
Idle Time: 19
Burst Time: 42
Efficiency is 0.69
Throughput is 98.36 per a second
================================================================================================
```

RR

```
File being executed: test/Set0_Short_TitleVer3.csv

================================================================================================================================================
                                                RR
================================================================================================================================================
                  Title          Response Time   Turnaround Time          Waiting Time             Start Time           End Time
P1              How to Murder People            0               10                  3                   1                   38
P2              Marine Conservation             10              20                  13                  2                   39
P3              Killing Humans          20              30                  23                  3                   40
P4              Women in STEM           30              40                  33                  4                   41
P5              Making Bombs            40              50                  43                  5                   42
P6              Eco Projects            50              60                  53                  6                   43
------------------------------------------------------------------------------------------------------------------------
Avg                                     8.3             11.7                9.3

Total Time: 43
Idle Time: 1
Burst Time: 42
Efficiency is 0.98
Throughput is 139.53 per a second
================================================================================================
```

MLFQ

```
File being executed: test/Set0_Short_TitleVer3.csv

=================================================================================================================================================================
                                                MLFQ
=================================================================================================================================================================
                  Title          Response Time   Turnaround Time          Waiting Time             Start Time           End Time
P1              How to Murder People            0              10                    3                    1                    18
P2              Marine Conservation             10             20                    13                   3                    23
P3              Killing Humans          20              30                    23                   5                    28
P4              Women in STEM           30              40                    33                   7                    33
P5              Making Bombs            40              50                    43                   9                    38
P6              Eco Projects            50              60                    53                   11                   43
-----------------------------------------------------------------------------------------------------------------
Avg                                     6.2             8.8                   7.0

Total Time: 43
Idle Time: 1
Burst Time: 42
Efficiency is 0.98
Throughput is 139.53 per a second
=================================================================================================================
-----------------------------------------------------------
```

ChatGPT-3.5

```
File being executed: test/Set0_Short_TitleVer3.csv

ChatGPT Scheduler not yet implemented
=================================================================================================================================================================
                                               GPT4S
=================================================================================================================================================================
                  Title          Response Time   Turnaround Time          Waiting Time             Start Time           End Time
P1              How to Murder People            0              10                    3                    1                    19
P2              Marine Conservation             10             20                    13                   2                    28
P4              Women in STEM           20              30                    23                   8                    33
P6              Eco Projects            30              40                    33                   12                   50
P3              Killing Humans          40              50                    43                   14                   48
P5              Making Bombs            50              60                    53                   20                   45
-----------------------------------------------------------------------------------------------------------------
Avg                                     5.0             7.0                   5.6

Total Time: 50
Idle Time: 8
Burst Time: 42
Efficiency is 0.84
Throughput is 120.00 per a second
=================================================================================================================
```

GEMINI

```
File being executed: test/Set0_Short_TitleVer3.csv

Gemini Scheduler not yet implemented
=================================================================================================================================================================
                                               GEMINIS
=================================================================================================================================================================
                  Title          Response Time   Turnaround Time          Waiting Time             Start Time           End Time
P1              How to Murder People            0              10                    3                    1                    23
P3              Killing Humans          10              20                    13                   4                    43
P4              Women in STEM           20              30                    23                   9                    46
P6              Eco Projects            30              40                    33                   11                   39
P2              Marine Conservation             40             50                    43                   18                   38
P5              Making Bombs            50              60                    53                   25                   50
-----------------------------------------------------------------------------------------------------------------
Avg                                     4.2             5.8                   4.7

Total Time: 50
Idle Time: 8
Burst Time: 42
Efficiency is 0.84
Throughput is 120.00 per a second
=================================================================================================================
```

Set0_Title.csv

cpu-scheduling-algorithm-master > test > Set0_Title.csv > data

```csv
process_id,arrival_time,cpu_time1,io_time,cpu_time2,title
1,1,5,3,4,Women in STEM
2,1,5,3,4,Men's Mental Health
3,1,5,3,4,Eco Projects
4,1,5,3,4,Marine Conservation
5,1,5,3,4,Making Bombs
6,1,5,3,4,Making Weapons
7,1,5,3,4,Killing Humans
8,1,5,3,4,How to Murder People
```

FCFS

```
File being executed: test/Set0_Title.csv

=================================================================================================================================================
                                                FCFS
=================================================================================================================================================
                Title          Response Time    Turnaround Time          Waiting Time             Start Time            End Time
P1              Women in STEM          0               12                      3                       1                     13
P2              Men's Mental Health             12              24                      15                      13                    25
P3              Eco Projects           24              36                      27                      25                    37
P4              Marine Conservation            36              48                      39                      37                    49
P5              Making Bombs           48              60                      51                      49                    61
P6              Making Weapons         60              72                      63                      61                    73
P7              Killing Humans         72              84                      75                      73                    85
P8              How to Murder People           84              96                      87                      85                    97
-------------------------------------------------------------------------------------------------------------------------------------------------
Avg                                    42.0            54.0                    45.0

Total Time: 97
Idle Time: 25
Burst Time: 72
Efficiency is 0.74
Throughput is 82.47 per a second
=================================================================================================================================================
```

SJF

```
File being executed: test/Set0_Title.csv

=================================================================================================================================================
                                                SJF
=================================================================================================================================================
                Title          Response Time    Turnaround Time          Waiting Time             Start Time            End Time
P1              Women in STEM          0               12                      3                       1                     13
P2              Men's Mental Health             12              24                      15                      13                    25
P3              Eco Projects           24              36                      27                      25                    37
P4              Marine Conservation            36              48                      39                      37                    49
P5              Making Bombs           48              60                      51                      49                    61
P6              Making Weapons         60              72                      63                      61                    73
P7              Killing Humans         72              84                      75                      73                    85
P8              How to Murder People           84              96                      87                      85                    97
-------------------------------------------------------------------------------------------------------------------------------------------------
Avg                                    21.0            27.0                    22.5

Total Time: 97
Idle Time: 25
Burst Time: 72
Efficiency is 0.74
Throughput is 82.47 per a second
=================================================================================================================================================
```

RR

```
File being executed: test/Set0_Title.csv

=================================================================================================================================================
                                                RR
=================================================================================================================================================
                  Title          Response Time    Turnaround Time          Waiting Time             Start Time           End Time
P1              Women in STEM          0               12                      3                       1                    66
P2              Men's Mental Health            12               24                      15                      2                    67
P3              Eco Projects           24              36                      27                      3                    68
P4              Marine Conservation            36              48                      39                      4                    69
P5              Making Bombs           48              60                      51                      5                    70
P6              Making Weapons         60              72                      63                      6                    71
P7              Killing Humans         72              84                      75                      7                    72
P8              How to Murder People           84              96                      87                      8                    73
-------------------------------------------------------------------------------------------------------------------------------------------------
Avg                                    14.0            18.0                    15.0

Total Time: 73
Idle Time: 1
Burst Time: 72
Efficiency is 0.99
Throughput is 109.59 per a second
=================================================================================================================================================
```

MLFQ

```
File being executed: test/Set0_Title.csv

=================================================================================================================================================
                                              MLFQ
=================================================================================================================================================
                  Title          Response Time    Turnaround Time          Waiting Time             Start Time           End Time
P1              Women in STEM          0               12                      3                       1                    45
P2              Men's Mental Health            12               24                      15                      6                    49
P3              Eco Projects           24              36                      27                      11                   53
P4              Marine Conservation            36              48                      39                      16                   57
P5              Making Bombs           48              60                      51                      21                   61
P6              Making Weapons         60              72                      63                      26                   65
P7              Killing Humans         72              84                      75                      31                   69
P8              How to Murder People           84              96                      87                      36                   73
-------------------------------------------------------------------------------------------------------------------------------------------------
Avg                                    10.5            13.5                    11.2

Total Time: 73
Idle Time: 1
Burst Time: 72
Efficiency is 0.99
Throughput is 109.59 per a second
=================================================================================================================================================
```

ChatGPT-3.5

```
File being executed: test/Set0_Title.csv

ChatGPT Scheduler not yet implemented
=================================================================================================================================================
                                             GPT4S
=================================================================================================================================================
                  Title          Response Time    Turnaround Time          Waiting Time             Start Time           End Time
P6              Making Weapons         0               12                      3                       1                    46
P2              Men's Mental Health            12               24                      15                      2                    25
P4              Marine Conservation            24              36                      27                      5                    44
P1              Women in STEM          36              48                      39                      14                   45
P7              Killing Humans         48              60                      51                      15                   75
P3              Eco Projects           60              72                      63                      32                   77
P5              Making Bombs           72              84                      75                      46                   69
P8              How to Murder People           84              96                      87                      47                   80
-------------------------------------------------------------------------------------------------------------------------------------------------
Avg                                    8.4             10.8                    9.0

Total Time: 80
Idle Time: 8
Burst Time: 72
Efficiency is 0.90
Throughput is 100.00 per a second
=================================================================================================================================================
```

GEMINI

```
File being executed: test/Set0_Title.csv

Gemini Scheduler not yet implemented
=================================================================================================================================================
                                             GEMINIS
=================================================================================================================================================
                  Title          Response Time    Turnaround Time          Waiting Time             Start Time           End Time
P1              Women in STEM          0               12                      3                       1                    48
P8              How to Murder People           12              24                      15                      2                    27
P7              Killing Humans         24              36                      27                      4                    70
P6              Making Weapons         36              48                      39                      6                    56
P2              Men's Mental Health            48              60                      51                      7                    55
P3              Eco Projects           60              72                      63                      10                   69
P4              Marine Conservation            72              84                      75                      11                   74
P5              Making Bombs           84              96                      87                      12                   83
-------------------------------------------------------------------------------------------------------------------------------------------------
Avg                                    7.0             9.0                     7.5

Total Time: 83
Idle Time: 11
Burst Time: 72
Efficiency is 0.87
Throughput is 96.39 per a second
=================================================================================================================================================
```

Set0_TitleVer2.csv

cpu-scheduling-algorithm-master > test > Set0_TitleVer2.csv > data

```
process_id,arrival_time,cpu_time1,io_time,cpu_time2,title
1,1,5,3,4,Making Bombs
2,1,5,3,4,Making Weapons
3,1,5,3,4,Killing Humans
4,1,5,3,4,How to Murder People
5,1,5,3,4,Women in STEM
6,1,5,3,4,Men's Mental Health
7,1,5,3,4,Eco Projects
8,1,5,3,4,Marine Conservation
```

FCFS

```
File being executed: test/Set0_TitleVer2.csv

================================================================================================================================================
                                                FCFS
================================================================================================================================================
                 Title          Response Time   Turnaround Time          Waiting Time            Start Time          End Time
P1             Making Bombs            0               12                      3                       1                   13
P2             Making Weapons          12              24                      15                      13                  25
P3             Killing Humans          24              36                      27                      25                  37
P4             How to Murder People            36              48                      39                      37                  49
P5             Women in STEM           48              60                      51                      49                  61
P6             Men's Mental Health             60              72                      63                      61                  73
P7             Eco Projects            72              84                      75                      73                  85
P8             Marine Conservation             84              96                      87                      85                  97
------------------------------------------------------------------------------------------------------------------------------------------------
Avg                                    42.0            54.0                    45.0

Total Time: 97
Idle Time: 25
Burst Time: 72
Efficiency is 0.74
Throughput is 82.47 per a second
================================================================================================================================================
```

SJF

```
File being executed: test/Set0_TitleVer2.csv

================================================================================================================================================
                                                SJF
================================================================================================================================================
                 Title          Response Time   Turnaround Time          Waiting Time            Start Time          End Time
P1             Making Bombs            0               12                      3                       1                   13
P2             Making Weapons          12              24                      15                      13                  25
P3             Killing Humans          24              36                      27                      25                  37
P4             How to Murder People            36              48                      39                      37                  49
P5             Women in STEM           48              60                      51                      49                  61
P6             Men's Mental Health             60              72                      63                      61                  73
P7             Eco Projects            72              84                      75                      73                  85
P8             Marine Conservation             84              96                      87                      85                  97
------------------------------------------------------------------------------------------------------------------------------------------------
Avg                                    21.0            27.0                    22.5

Total Time: 97
Idle Time: 25
Burst Time: 72
Efficiency is 0.74
Throughput is 82.47 per a second
================================================================================================================================================
```

RR

```
File being executed: test/Set0_TitleVer2.csv

=================================================================================================================================================================
                                                RR
=================================================================================================================================================================
                  Title          Response Time    Turnaround Time          Waiting Time             Start Time           End Time
P1              Making Bombs            0               12                      3                       1                    66
P2              Making Weapons          12              24                      15                      2                    67
P3              Killing Humans          24              36                      27                      3                    68
P4              How to Murder People            36              48                      39                      4                    69
P5              Women in STEM           48              60                      51                      5                    70
P6              Men's Mental Health             60              72                      63                      6                    71
P7              Eco Projects            72              84                      75                      7                    72
P8              Marine Conservation             84              96                      87                      8                    73
-----------------------------------------------------------------------------------------------------------------
Avg                                     14.0            18.0                    15.0

Total Time: 73
Idle Time: 1
Burst Time: 72
Efficiency is 0.99
Throughput is 109.59 per a second
=================================================================================================================
```

MLFQ

```
File being executed: test/Set0_TitleVer2.csv

=================================================================================================================================================================
                                                MLFQ
=================================================================================================================================================================
                  Title          Response Time    Turnaround Time          Waiting Time             Start Time           End Time
P1              Making Bombs            0               12                      3                       1                    45
P2              Making Weapons          12              24                      15                      6                    49
P3              Killing Humans          24              36                      27                      11                   53
P4              How to Murder People            36              48                      39                      16                   57
P5              Women in STEM           48              60                      51                      21                   61
P6              Men's Mental Health             60              72                      63                      26                   65
P7              Eco Projects            72              84                      75                      31                   69
P8              Marine Conservation             84              96                      87                      36                   73
-----------------------------------------------------------------------------------------------------------------
Avg                                     10.5            13.5                    11.2

Total Time: 73
Idle Time: 1
Burst Time: 72
Efficiency is 0.99
Throughput is 109.59 per a second
=================================================================================================================
```

ChatGPT-3.5

```
File being executed: test/Set0_TitleVer2.csv

ChatGPT Scheduler not yet implemented
=================================================================================================================================================================
                                                GPT4S
=================================================================================================================================================================
                  Title          Response Time    Turnaround Time          Waiting Time             Start Time           End Time
P2              Making Weapons          0               12                      3                       1                    26
P1              Making Bombs            12              24                      15                      3                    39
P3              Killing Humans          24              36                      27                      4                    54
P4              How to Murder People            36              48                      39                      5                    59
P5              Women in STEM           48              60                      51                      8                    63
P6              Men's Mental Health             60              72                      63                      11                   71
P7              Eco Projects            72              84                      75                      18                   74
P8              Marine Conservation             84              96                      87                      32                   82
-----------------------------------------------------------------------------------------------------------------
Avg                                     8.4             10.8                    9.0

Total Time: 82
Idle Time: 10
Burst Time: 72
Efficiency is 0.88
Throughput is 97.56 per a second
=================================================================================================================
```

GEMINI

```
Enter: 6
================================================================================================================================================
                                                GEMINIS
================================================================================================================================================
                Title          Response Time   Turnaround Time          Waiting Time            Start Time          End Time
P1              Making Bombs            0               14                    5                   1                   15
P8              Marine Conservation             9               66                    57                  10                  67
P7              Eco Projects            10              49                    40                  11                  50
P2              Making Weapons          14              26                    17                  15                  27
P3              Killing Humans          28              78                    69                  29                  79
P4              How to Murder People            29              75                    66                  30                  76
P5              Women in STEM           31              87                    78                  32                  88
P6              Men's Mental Health             32              67                    58                  33                  68
------------------------------------------------------------------------------------------------------------------------------------------------
Avg                                     19.1            57.8                  48.8

Total Time: 88
Idle Time: 16
Burst Time: 72
Efficiency is 0.82
Throughput is 90.91 per a second
================================================================================================================================================
```

Set0_TitleVer3.csv

cpu-scheduling-algorithm-master > test > Set0_TitleVer3.csv > data

```
1   process_id,arrival_time,cpu_time1,io_time,cpu_time2,title
2   1,1,5,3,4,Making Bombs
3   2,1,5,3,4,Men's Mental Health
4   3,1,5,3,4,Killing Humans
5   4,1,5,3,4,Marine Conservation
6   5,1,5,3,4,Women in STEM
7   6,1,5,3,4,Making Weapons
8   7,1,5,3,4,Eco Projects
9   8,1,5,3,4,How to Murder People
```

FCFS

```
================================================================================================================================================
                                                FCFS
================================================================================================================================================
                Title          Response Time   Turnaround Time          Waiting Time            Start Time          End Time
P1              Making Bombs            0               12                    3                   1                   13
P2              Men's Mental Health             12              24                    15                  13                  25
P3              Killing Humans          24              36                    27                  25                  37
P4              Marine Conservation             36              48                    39                  37                  49
P5              Women in STEM           48              60                    51                  49                  61
P6              Making Weapons          60              72                    63                  61                  73
P7              Eco Projects            72              84                    75                  73                  85
P8              How to Murder People            84              96                    87                  85                  97
------------------------------------------------------------------------------------------------------------------------------------------------
Avg                                     42.0            54.0                  45.0

Total Time: 97
Idle Time: 25
Burst Time: 72
Efficiency is 0.74
Throughput is 82.47 per a second
================================================================================================================================================
```

SJF

```
================================================================================================================================================
                                                SJF
================================================================================================================================================
                  Title          Response Time    Turnaround Time          Waiting Time             Start Time           End Time
P1              Making Bombs            0               12                      3                       1                   13
P2              Men's Mental Health             12              24                      15                      13                  25
P3              Killing Humans          24              36                      27                      25                  37
P4              Marine Conservation             36              48                      39                      37                  49
P5              Women in STEM           48              60                      51                      49                  61
P6              Making Weapons          60              72                      63                      61                  73
P7              Eco Projects            72              84                      75                      73                  85
P8              How to Murder People            84              96                      87                      85                  97
------------------------------------------------------------------------------------------------------------------------------------------------
Avg                                     21.0            27.0                    22.5

Total Time: 97
Idle Time: 25
Burst Time: 72
Efficiency is 0.74
Throughput is 82.47 per a second
================================================================================================================================================
```

RR

```
================================================================================================================================================
                                                RR
================================================================================================================================================
                  Title          Response Time    Turnaround Time          Waiting Time             Start Time           End Time
P1              Making Bombs            0               12                      3                       1                   66
P2              Men's Mental Health             12              24                      15                      2                   67
P3              Killing Humans          24              36                      27                      3                   68
P4              Marine Conservation             36              48                      39                      4                   69
P5              Women in STEM           48              60                      51                      5                   70
P6              Making Weapons          60              72                      63                      6                   71
P7              Eco Projects            72              84                      75                      7                   72
P8              How to Murder People            84              96                      87                      8                   73
------------------------------------------------------------------------------------------------------------------------------------------------
Avg                                     14.0            18.0                    15.0

Total Time: 73
Idle Time: 1
Burst Time: 72
Efficiency is 0.99
Throughput is 109.59 per a second
================================================================================================================================================
```

MLFQ

```
================================================================================================================================================
                                                MLFQ
================================================================================================================================================
                  Title          Response Time    Turnaround Time          Waiting Time             Start Time           End Time
P1              Making Bombs            0               12                      3                       1                   45
P2              Men's Mental Health             12              24                      15                      6                   49
P3              Killing Humans          24              36                      27                      11                  53
P4              Marine Conservation             36              48                      39                      16                  57
P5              Women in STEM           48              60                      51                      21                  61
P6              Making Weapons          60              72                      63                      26                  65
P7              Eco Projects            72              84                      75                      31                  69
P8              How to Murder People            84              96                      87                      36                  73
------------------------------------------------------------------------------------------------------------------------------------------------
Avg                                     10.5            13.5                    11.2

Total Time: 73
Idle Time: 1
Burst Time: 72
Efficiency is 0.99
Throughput is 109.59 per a second
================================================================================================================================================
```

ChatGPT-3.5

```
FileName:  test/Set0_TitleVer3.csv
================================================================================================================================================
                                                GPT4S
================================================================================================================================================
                  Title          Response Time    Turnaround Time          Waiting Time             Start Time           End Time
P2              Men's Mental Health             0               12                      3                       1                   27
P1              Making Bombs            12              24                      15                      2                   33
P3              Killing Humans          24              36                      27                      3                   74
P5              Women in STEM           36              48                      39                      6                   38
P7              Eco Projects            48              60                      51                      11                  72
P6              Making Weapons          60              72                      63                      18                  58
P8              How to Murder People            72              84                      75                      38                  81
P4              Marine Conservation             84              96                      87                      41                  82
------------------------------------------------------------------------------------------------------------------------------------------------
Avg                                     8.4             10.8                    9.0

Total Time: 82
Idle Time: 10
Burst Time: 72
Efficiency is 0.88
Throughput is 97.56 per a second
================================================================================================================================================
------------------------------------------------------------
```

GEMINI

```
FileName:  test/Set0_TitleVer3.csv
================================================================================================================================================
                                                GEMINIS
================================================================================================================================================
                  Title          Response Time    Turnaround Time          Waiting Time              Start Time            End Time
P1              Making Bombs            0               12                      3                       1                     25
P8              How to Murder People            12              24                      15                      3                     59
P7              Eco Projects            24              36                      27                      4                     30
P6              Making Weapons          36              48                      39                      5                     69
P5              Women in STEM           48              60                      51                      6                     82
P2              Men's Mental Health             60              72                      63                      9                     62
P3              Killing Humans          72              84                      75                      10                    68
P4              Marine Conservation             84              96                      87                      13                    81
------------------------------------------------------------------------------------------------------------------------------------------------
Avg                                     7.0             9.0                     7.5

Total Time: 82
Idle Time: 10
Burst Time: 72
Efficiency is 0.88
Throughput is 97.56 per a second
================================================================================================================================================
```

Set0_Negative_Title.csv:

cpu-scheduling-algorithm-master > test > Set0_Negative_Title.csv > d

```
1   process_id,arrival_time,cpu_time1,io_time,cpu_time2,title
2   1,1,2,3,5,Killing Refugees
3   2,1,2,3,5,Deport Refugees
4   3,1,2,3,5,Killing  Citizens
5   4,1,2,3,5,Manipulate Citizens
```

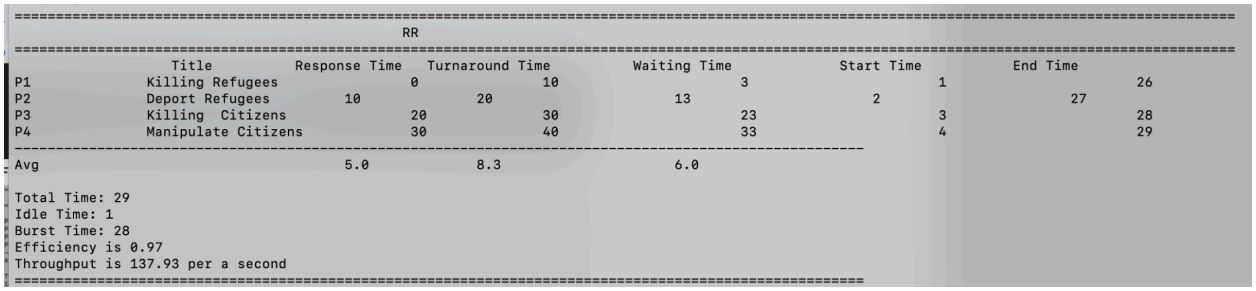
FCFS

```
================================================================================================================================================
                                                FCFS
================================================================================================================================================
                  Title          Response Time    Turnaround Time          Waiting Time              Start Time            End Time
P1              Killing Refugees                0               10                      3                       1                     11
P2              Deport Refugees         10              20                      13                      11                    21
P3              Killing  Citizens               20              30                      23                      21                    31
P4              Manipulate Citizens             30              40                      33                      31                    41
------------------------------------------------------------------------------------------------------------------------------------------------
Avg                                     15.0            25.0                    18.0

Total Time: 41
Idle Time: 13
Burst Time: 28
Efficiency is 0.68
Throughput is 97.56 per a second
================================================================================================================================================
```

SJF

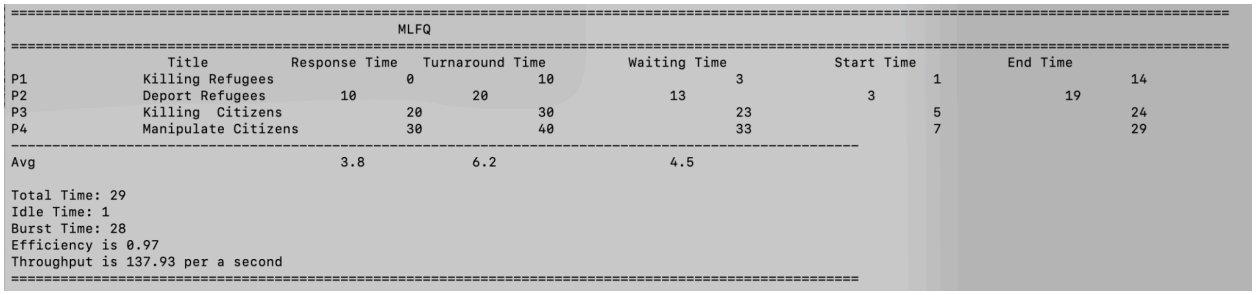
```
================================================================================================================================================
                                                SJF
================================================================================================================================================
                  Title          Response Time    Turnaround Time          Waiting Time              Start Time            End Time
P1              Killing Refugees                0               10                      3                       1                     11
P2              Deport Refugees         10              20                      13                      11                    21
P3              Killing  Citizens               20              30                      23                      21                    31
P4              Manipulate Citizens             30              40                      33                      31                    41
------------------------------------------------------------------------------------------------------------------------------------------------
Avg                                     7.5             12.5                    9.0

Total Time: 41
Idle Time: 13
Burst Time: 28
Efficiency is 0.68
Throughput is 97.56 per a second
================================================================================================================================================
```

RR



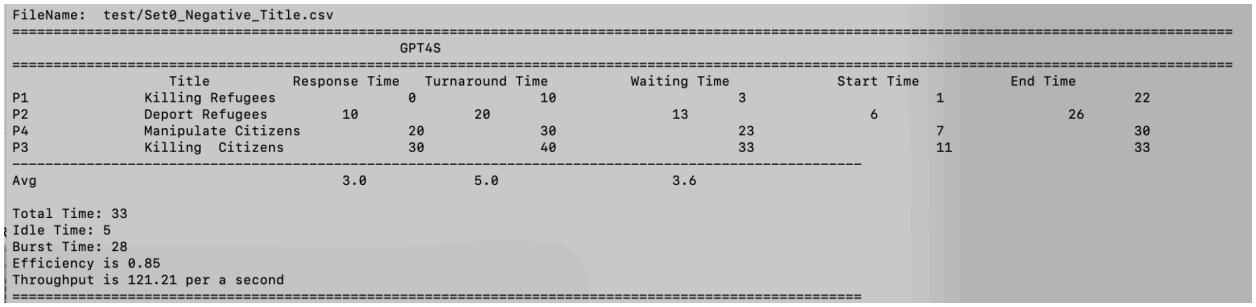
```
                                                                RR
                  Title          Response Time   Turnaround Time          Waiting Time             Start Time          End Time
P1              Killing Refugees                0               10                  3                   1                   26
P2              Deport Refugees         10              20                  13                  2                   27
P3              Killing  Citizens               20              30                  23                  3                   28
P4              Manipulate Citizens             30              40                  33                  4                   29
-----------------------------------------------------------------------------------------------------------
Avg                                     5.0             8.3                 6.0

Total Time: 29
Idle Time: 1
Burst Time: 28
Efficiency is 0.97
Throughput is 137.93 per a second
```

MLFQ



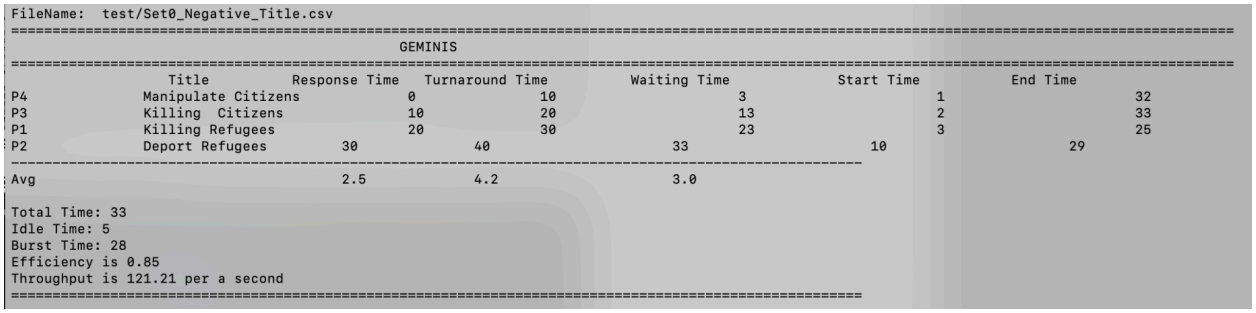
```
                                                               MLFQ
                  Title          Response Time   Turnaround Time          Waiting Time             Start Time          End Time
P1              Killing Refugees                0               10                  3                   1                   14
P2              Deport Refugees         10              20                  13                  3                   19
P3              Killing  Citizens               20              30                  23                  5                   24
P4              Manipulate Citizens             30              40                  33                  7                   29
-----------------------------------------------------------------------------------------------------------
Avg                                     3.8             6.2                 4.5

Total Time: 29
Idle Time: 1
Burst Time: 28
Efficiency is 0.97
Throughput is 137.93 per a second
```

ChatGPT-3.5



```
FileName:  test/Set0_Negative_Title.csv
                                                               GPT4S
                  Title          Response Time   Turnaround Time          Waiting Time             Start Time          End Time
P1              Killing Refugees                0               10                  3                   1                   22
P2              Deport Refugees         10              20                  13                  6                   26
P4              Manipulate Citizens             20              30                  23                  7                   30
P3              Killing  Citizens               30              40                  33                  11                  33
-----------------------------------------------------------------------------------------------------------
Avg                                     3.0             5.0                 3.6

Total Time: 33
Idle Time: 5
Burst Time: 28
Efficiency is 0.85
Throughput is 121.21 per a second
```

GEMINI



```
FileName:  test/Set0_Negative_Title.csv
                                                               GEMINIS
                  Title          Response Time   Turnaround Time          Waiting Time             Start Time          End Time
P4              Manipulate Citizens             0               10                  3                   1                   32
P3              Killing  Citizens               10              20                  13                  2                   33
P1              Killing Refugees                20              30                  23                  3                   25
P2              Deport Refugees         30              40                  33                  10                  29
-----------------------------------------------------------------------------------------------------------
Avg                                     2.5             4.2                 3.0

Total Time: 33
Idle Time: 5
Burst Time: 28
Efficiency is 0.85
Throughput is 121.21 per a second
```

Set0_Negative_TitleVer2.csv:

cpu-scheduling-algorithm-master > test > Set0_Negative_TitleVer2.csv > data

```
process_id,arrival_time,cpu_time1,io_time,cpu_time2,title
1,1,2,3,5,Killing  Citizens
2,1,2,3,5,Manipulate Citizens
3,1,2,3,5,Killing Refugees
4,1,2,3,5,Deport Refugees
```

FCFS

```
FileName:  test/Set0_Negative_TitleVer2.csv
================================================================================================================================================
                                                FCFS
================================================================================================================================================
                  Title          Response Time    Turnaround Time          Waiting Time             Start Time           End Time
P1              Killing  Citizens               0               10                      3                      1                      11
P2              Manipulate Citizens             10               20                     13                     11                      21
P3              Killing Refugees                20               30                     23                     21                      31
P4              Deport Refugees         30              40                      33                      31                     41
------------------------------------------------------------------------------------------------------------------------------------------------
Avg                                     15.0            25.0                    18.0

Total Time: 41
Idle Time: 13
Burst Time: 28
Efficiency is 0.68
Throughput is 97.56 per a second
================================================================================================================================================
```

SJF

```
FileName:  test/Set0_Negative_TitleVer2.csv
================================================================================================================================================
                                                SJF
================================================================================================================================================
                  Title          Response Time    Turnaround Time          Waiting Time             Start Time           End Time
P1              Killing  Citizens               0               10                      3                      1                      11
P2              Manipulate Citizens             10               20                     13                     11                      21
P3              Killing Refugees                20               30                     23                     21                      31
P4              Deport Refugees         30              40                      33                      31                     41
------------------------------------------------------------------------------------------------------------------------------------------------
Avg                                     7.5             12.5                    9.0

Total Time: 41
Idle Time: 13
Burst Time: 28
Efficiency is 0.68
Throughput is 97.56 per a second
================================================================================================================================================
```

RR

```
FileName:  test/Set0_Negative_TitleVer2.csv
================================================================================================================================================
                                                RR
================================================================================================================================================
                  Title          Response Time    Turnaround Time          Waiting Time             Start Time           End Time
P1              Killing  Citizens               0               10                      3                      1                      26
P2              Manipulate Citizens             10               20                     13                      2                      27
P3              Killing Refugees                20               30                     23                      3                      28
P4              Deport Refugees         30              40                      33                      4                     29
------------------------------------------------------------------------------------------------------------------------------------------------
Avg                                     5.0             8.3                     6.0

Total Time: 29
Idle Time: 1
Burst Time: 28
Efficiency is 0.97
Throughput is 137.93 per a second
================================================================================================================================================
```

MLFQ

```
FileName:  test/Set0_Negative_TitleVer2.csv
=================================================================================================================================================
                                                MLFQ
=================================================================================================================================================
                  Title          Response Time   Turnaround Time          Waiting Time             Start Time           End Time
P1              Killing  Citizens              0              10                     3                      1                     14
P2              Manipulate Citizens            10              20                    13                      3                     19
P3              Killing Refugees               20              30                    23                      5                     24
P4              Deport Refugees         30              40                     33                      7                     29
-------------------------------------------------------------------------------------------------------------------------------------------------
Avg                                     3.8             6.2                    4.5

Total Time: 29
Idle Time: 1
Burst Time: 28
Efficiency is 0.97
Throughput is 137.93 per a second
=================================================================================================================================================
```

ChatGPT-3.5

```
FileName:  test/Set0_Negative_TitleVer2.csv
=================================================================================================================================================
                                                GPT4S
=================================================================================================================================================
                  Title          Response Time   Turnaround Time          Waiting Time             Start Time           End Time
P2              Manipulate Citizens            0              10                     3                      1                     14
P1              Killing  Citizens              10              20                    13                      2                     20
P3              Killing Refugees               20              30                    23                      7                     31
P4              Deport Refugees         30              40                     33                      17                     34
-------------------------------------------------------------------------------------------------------------------------------------------------
Avg                                     3.0             5.0                    3.6

Total Time: 34
Idle Time: 6
Burst Time: 28
Efficiency is 0.82
Throughput is 117.65 per a second
=================================================================================================================================================
```

GEMINI

```
FileName:  test/Set0_Negative_TitleVer2.csv
=================================================================================================================================================
                                                GEMINIS
=================================================================================================================================================
                  Title          Response Time   Turnaround Time          Waiting Time             Start Time           End Time
P2              Manipulate Citizens            0              10                     3                      1                     23
P1              Killing  Citizens              10              20                    13                      6                     19
P4              Deport Refugees         20              30                     23                      13                     30
P3              Killing Refugees               30              40                    33                      27                     39
-------------------------------------------------------------------------------------------------------------------------------------------------
Avg                                     2.5             4.2                    3.0

Total Time: 39
Idle Time: 11
Burst Time: 28
Efficiency is 0.72
Throughput is 102.56 per a second
=================================================================================================================================================
```

Set0_Negative_TitleVer3.csv:

cpu-scheduling-algorithm-master > test > Set0_Negative_TitleVer3.csv > dat

```
1   process_id,arrival_time,cpu_time1,io_time,cpu_time2,title
2   1,1,2,3,5,Killing  Citizens
3   2,1,2,3,5,Killing Refugees
4   3,1,2,3,5,Manipulate Citizens
5   4,1,2,3,5,Deport Refugees
```

FCFS

```
FileName:  test/Set0_Negative_TitleVer3.csv
================================================================================================================================================
                                        FCFS
================================================================================================================================================
                  Title          Response Time   Turnaround Time          Waiting Time             Start Time           End Time
P1             Killing  Citizens              0              10                     3                      1                     11
P2             Killing Refugees               10              20                    13                     11                     21
P3             Manipulate Citizens            20              30                    23                     21                     31
P4             Deport Refugees         30             40                     33                     31                     41
------------------------------------------------------------------------------------------------
Avg                                    15.0            25.0                   18.0

Total Time: 41
Idle Time: 13
Burst Time: 28
Efficiency is 0.68
Throughput is 97.56 per a second
================================================================================================
```

SJF

```
FileName:  test/Set0_Negative_TitleVer3.csv
================================================================================================================================================
                                        SJF
================================================================================================================================================
                  Title          Response Time   Turnaround Time          Waiting Time             Start Time           End Time
P1             Killing  Citizens              0              10                     3                      1                     11
P2             Killing Refugees               10              20                    13                     11                     21
P3             Manipulate Citizens            20              30                    23                     21                     31
P4             Deport Refugees         30             40                     33                     31                     41
------------------------------------------------------------------------------------------------
Avg                                    7.5             12.5                   9.0

Total Time: 41
Idle Time: 13
Burst Time: 28
Efficiency is 0.68
Throughput is 97.56 per a second
================================================================================================
```

RR

```
FileName:  test/Set0_Negative_TitleVer3.csv
================================================================================================================================================
                                        RR
================================================================================================================================================
                  Title          Response Time   Turnaround Time          Waiting Time             Start Time           End Time
P1             Killing  Citizens              0              10                     3                      1                     26
P2             Killing Refugees               10              20                    13                      2                     27
P3             Manipulate Citizens            20              30                    23                      3                     28
P4             Deport Refugees         30             40                     33                      4                     29
------------------------------------------------------------------------------------------------
Avg                                    5.0             8.3                    6.0

Total Time: 29
Idle Time: 1
Burst Time: 28
Efficiency is 0.97
Throughput is 137.93 per a second
================================================================================================
```

MLFQ

```
FileName:  test/Set0_Negative_TitleVer3.csv
================================================================================================================================================
                                        MLFQ
================================================================================================================================================
                  Title          Response Time   Turnaround Time          Waiting Time             Start Time           End Time
P1             Killing  Citizens              0              10                     3                      1                     14
P2             Killing Refugees               10              20                    13                      3                     19
P3             Manipulate Citizens            20              30                    23                      5                     24
P4             Deport Refugees         30             40                     33                      7                     29
------------------------------------------------------------------------------------------------
Avg                                    3.8             6.2                    4.5

Total Time: 29
Idle Time: 1
Burst Time: 28
Efficiency is 0.97
Throughput is 137.93 per a second
================================================================================================
```

ChatGPT-3.5

```
FileName:  test/Set0_Negative_TitleVer3.csv
=================================================================================================================================================
                                                GPT4S
=================================================================================================================================================
                  Title          Response Time   Turnaround Time          Waiting Time             Start Time             End Time
P1              Killing  Citizens              0               10                      3                      1                      15
P2              Killing Refugees               10              20                      13                     3                      21
P3              Manipulate Citizens            20              30                      23                     8                      32
P4              Deport Refugees         30              40                      33                     19                     34
-------------------------------------------------------------------------------------------------------------------------------------------------
Avg                                     3.0             5.0                     3.6

Total Time: 34
Idle Time: 6
Burst Time: 28
Efficiency is 0.82
Throughput is 117.65 per a second
=================================================================================================================================================
```

GEMINI

```
FileName:  test/Set0_Negative_TitleVer3.csv
=================================================================================================================================================
                                               GEMINIS
=================================================================================================================================================
                  Title          Response Time   Turnaround Time          Waiting Time             Start Time             End Time
P1              Killing  Citizens              0               10                      3                      1                      12
P4              Deport Refugees         10              20                      13                     2                      27
P2              Killing Refugees               20              30                      23                     12                     31
P3              Manipulate Citizens            30              40                      33                     13                     33
-------------------------------------------------------------------------------------------------------------------------------------------------
Avg                                     2.5             4.2                     3.0

Total Time: 33
Idle Time: 5
Burst Time: 28
Efficiency is 0.85
Throughput is 121.21 per a second
=================================================================================================================================================
```