

OS project1 report

第六組

1. 設計

Sort processes in ascending order of RT if two processes have same RT then compare their id instead. After finishing sorting, decide which process to fork according to the time count and schedule policy

We can't get time with resolution of a nanosecond. The resolution of time is a microsecond. Therefore; the start time of all processes FIFO_1 are the same.

2. 執行範例測資的結果

FIFO_1

| | | | | |
|----------------|------------|-------|-------------------|-------------------|
| [18632.570782] | [project1] | 29796 | 1526407858.499512 | 1526407859.740346 |
| [18633.861505] | [project1] | 29797 | 1526407858.499512 | 1526407861.32100 |
| [18635.233573] | [project1] | 29798 | 1526407858.499512 | 1526407862.405271 |
| [18636.526460] | [project1] | 29799 | 1526407858.499512 | 1526407863.699194 |
| [18637.810470] | [project1] | 29800 | 1526407858.499512 | 1526407864.984241 |

FIFO_2

| | | | | | |
|----------|----------------|------------|-------|-------------------|-------------------|
| P1 30111 | [21690.390663] | [project1] | 30111 | 1526410699.549142 | 1526410920.20305 |
| P2 30112 | [21703.794005] | [project1] | 30112 | 1526410699.800157 | 1526410933.433812 |
| P3 30113 | [21706.497437] | [project1] | 30113 | 1526410700.49367 | 1526410936.140032 |
| P4 30114 | [21709.143019] | [project1] | 30114 | 1526410700.300053 | 1526410938.787746 |

FIFO_3

| | | | | |
|----------------|------------|-------|-------------------|-------------------|
| [19148.571400] | [project1] | 29885 | 1526408354.154776 | 1526408376.156044 |
| [19162.558621] | [project1] | 29886 | 1526408354.669106 | 1526408390.154571 |
| [19170.612384] | [project1] | 29887 | 1526408354.924122 | 1526408398.214813 |
| [19173.427294] | [project1] | 29888 | 1526408355.188319 | 1526408401.31973 |
| [19176.289292] | [project1] | 29889 | 1526408355.491183 | 1526408403.896271 |
| [19179.050833] | [project1] | 29890 | 1526408355.491183 | 1526408406.660051 |
| [19190.192345] | [project1] | 29891 | 1526408355.751237 | 1526408417.810529 |

SJF_1

| | | | | | |
|----------|----------------|------------|-------|-------------------|-------------------|
| P1 29958 | [19777.924730] | [project1] | 29959 | 1526409000.587762 | 1526409006.15733 |
| P2 29959 | [19780.724210] | [project1] | 29960 | 1526409000.843603 | 1526409008.817465 |
| P3 29960 | [19791.282517] | [project1] | 29961 | 1526409001.93382 | 1526409019.384289 |
| P4 29961 | [19811.827160] | [project1] | 29958 | 1526409000.587762 | 1526409039.945416 |

SJF_2

| | | | | | |
|----------|---------------|------------|-------|-------------------|-------------------|
| P2 30355 | 24376.189455] | [project1] | 30355 | 1526413607.730642 | 1526413607.979841 |
| P4 30356 | 24376.710336] | [project1] | 30359 | 1526413607.981132 | 1526413608.501146 |
| P1 30357 | 24387.333510] | [project1] | 30356 | 1526413607.730642 | 1526413619.132892 |
| P3 30358 | 24398.033672] | [project1] | 30358 | 1526413607.981132 | 1526413629.841664 |
| P5 30359 | 24416.569721] | [project1] | 30357 | 1526413607.981132 | 1526413648.392530 |

SJF_3

| | | | | | |
|----------|----------------|------------|-------|-------------------|-------------------|
| P1 30544 | [24992.765558] | [project1] | 30544 | 1526414216.581955 | 1526414225.52025 |
| P2 30545 | [24992.843136] | [project1] | 30547 | 1526414216.831066 | 1526414225.129659 |
| P3 30546 | [24992.868812] | [project1] | 30548 | 1526414216.831066 | 1526414225.155362 |
| P4 30547 | [25003.799595] | [project1] | 30549 | 1526414217.79907 | 1526414236.94850 |
| P5 30548 | [25014.830656] | [project1] | 30550 | 1526414217.327732 | 1526414247.134874 |
| P6 30549 | [25029.123458] | [project1] | 30545 | 1526414216.581955 | 1526414261.439145 |
| P7 30550 | [25049.057283] | [project1] | 30546 | 1526414216.581955 | 1526414281.389029 |
| P8 30551 | [25073.831949] | [project1] | 30551 | 1526414217.575263 | 1526414306.183613 |

PSJF_1

| | | | | |
|----------------|------------|-------|-------------------|-------------------|
| [19309.309667] | [project1] | 29917 | 1526408529.317407 | 1526408537.23653 |
| [19320.670701] | [project1] | 29916 | 1526408525.925425 | 1526408548.393858 |
| [19338.398508] | [project1] | 29915 | 1526408523.182278 | 1526408566.135914 |
| [19360.284721] | [project1] | 29914 | 1526408519.517874 | 1526408588.39748 |

PSJF_2

| | | | | | |
|----------|----------------|------------|-------|-------------------|-------------------|
| P1 29946 | [19564.222066] | [project1] | 29947 | 1526408789.533280 | 1526408792.141153 |
| P2 29947 | [19569.149424] | [project1] | 29946 | 1526408786.695139 | 1526408797.72450 |
| P3 29948 | [19579.690548] | [project1] | 29949 | 1526408802.201800 | 1526408807.622081 |
| P4 29949 | [19583.302404] | [project1] | 29950 | 1526408808.406777 | 1526408811.236843 |
| P5 29950 | [19588.330029] | [project1] | 29948 | 1526408792.767861 | 1526408816.268518 |

PSJF_3

| | | | | | |
|----------|----------------|------------|-------|-------------------|-------------------|
| P1 30017 | [20434.178960] | [project1] | 30018 | 1526409661.485812 | 1526409662.797956 |
| P2 30018 | [20435.548521] | [project1] | 30019 | 1526409662.839020 | 1526409664.168620 |
| P3 30019 | [20437.112474] | [project1] | 30020 | 1526409664.212833 | 1526409665.733812 |
| P4 30020 | [20441.412413] | [project1] | 30017 | 1526409660.150801 | 1526409670.37228 |

RR_1

| | | | | | |
|----------|----------------|------------|-------|-------------------|-------------------|
| P1 29995 | [20326.283910] | [project1] | 29995 | 1526409553.553410 | 1526409554.816076 |
| P2 29996 | [20327.655665] | [project1] | 29996 | 1526409553.553410 | 1526409556.188932 |
| P3 29997 | [20329.011881] | [project1] | 29997 | 1526409553.553410 | 1526409557.546266 |
| P4 29998 | [20330.311832] | [project1] | 29998 | 1526409553.553410 | 1526409558.847263 |
| P5 29999 | [20331.605642] | [project1] | 29999 | 1526409553.553410 | 1526409560.142113 |

RR_2

| | | | | | |
|----------|----------------|------------|-------|-------------------|-------------------|
| P1 30968 | [26335.198585] | [project1] | 30968 | 1526415549.989294 | 1526415568.565066 |
| P2 30969 | [26340.489345] | [project1] | 30969 | 1526415550.486170 | 1526415573.860043 |

RR_3

| | | | | | |
|----------|----------------|------------|-------|-------------------|-------------------|
| P1 31380 | [27479.543429] | [project1] | 31380 | 1526416669.158449 | 1526416713.830558 |
| P2 31381 | [27483.926361] | [project1] | 31382 | 1526416675.887950 | 1526416718.217003 |
| P3 31382 | [27487.690219] | [project1] | 31381 | 1526416672.672430 | 1526416721.983891 |
| P4 31383 | [27508.486810] | [project1] | 31385 | 1526416681.626306 | 1526416742.797208 |
| P5 31384 | [27513.696208] | [project1] | 31384 | 1526416680.58586 | 1526416748.10601 |
| P6 31385 | [27516.284128] | [project1] | 31383 | 1526416679.30166 | 1526416750.600790 |

3. 比較實際結果與理論結果，並解釋造成差異的原因

In any testing data, P_i ST equal to R_i . Not quite as expected.

In any testing data, every ETs are in the expected order.

In any testing data, every IDs are in the expected order.

4. 各組員的貢獻

簡偉晉: write src code, compile kernel, run testing data, discuss how to write the report.

周明德: discuss how to write src code, write the report.

沙佳哲: none

劉昕: none