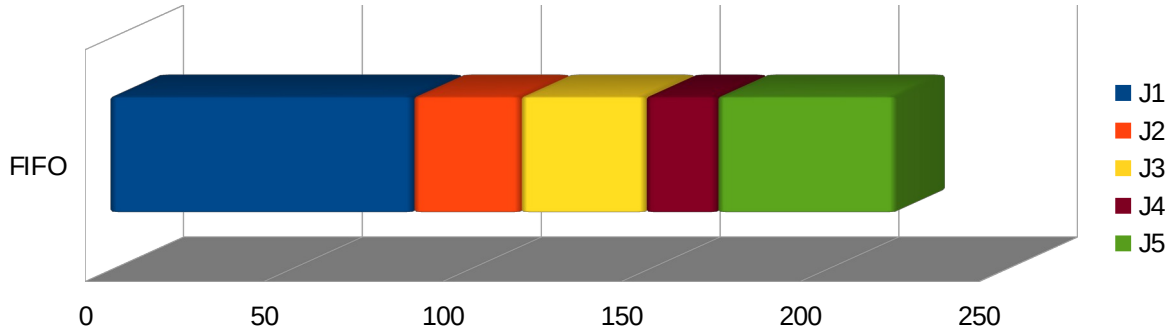
CSE 2431 - Homework 1

1)

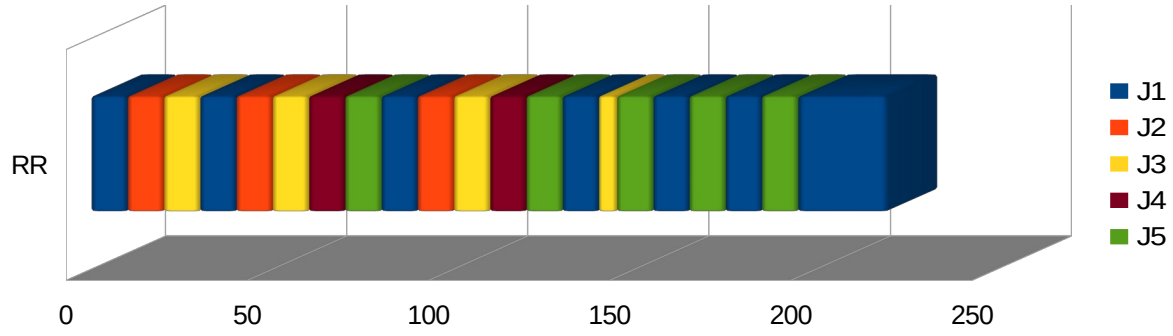
start num is 99
Parents's num is 110
end num is 109

2)

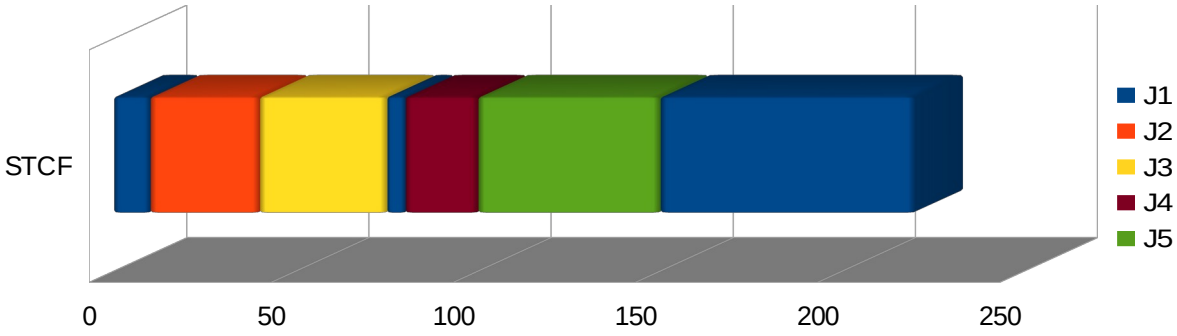
Starvation can occur in MLFQ with the first 4 rules. The 5th rule solves starvation by resetting priority after a specified length of time.



Completion Time: 220 seconds
Average Turnaround: 111 seconds



Completion Time: 220 seconds
Average Turnaround: 119 seconds



Completion Time: 220 seconds
Average Turnaround: 80 seconds

3)

a) FIFO

Processes	Length (s)	Arrival Time
P1	16	0
P2	7	2
P3	2	4
P4	4	6
P5	22	8

Turnaround Time: 51s
Avg Turnaround Time: 24.8s

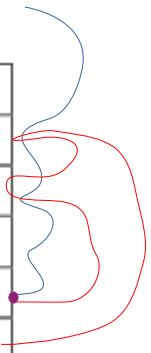
b) SJF

Processes	Length (s)	Arrival Time
P1	16	0
P2	7	2
P3	2	4
P4	4	6
P5	22	8

Turnaround Time: 51s
Avg Turnaround Time: 23.2s

c) STCF

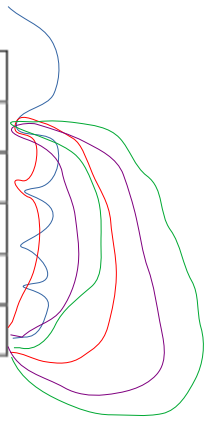
Processes	Length (s)	Arrival Time
P1	16	0
P2	7	2
P3	2	4
P4	4	6
P5	22	8



Turnaround Time: 51s
Avg Turnaround Time: 18.2s

d) RR

Processes	Length (s)	Arrival Time
P1	16	0
P2	7	2
P3	2	4
P4	4	6
P5	22	8



Turnaround Time: 51s
Avg Turnaround Time: 26.2s

Process:	P1	P2	P3	P4	P5	P1	P2	P5	P1	P5	P1	P5
Time:	5	10	12	16	21	26	28	33	38	43	44	51
Rem. Length:	11	2	0	0	17	6	0	12	1	7	0	0

4)

```
int add(int *a, int *b) {
     int ret = malloc(sizeof(int));
     if (a==NULL || b==NULL) {
          return NULL;
     }
     *ret = *a + *b;
     return ret;
}

int main(int argc, char *argv) {
     int a = 3;
     int b = 4;
     int ret = add(&a, &b);
     if(ret==NULL){
          printf("Error\n");
     }
     else {
          printf("3+4=%d\n", *ret);
     }
     return 0;
}
```