Programming Assignment 2

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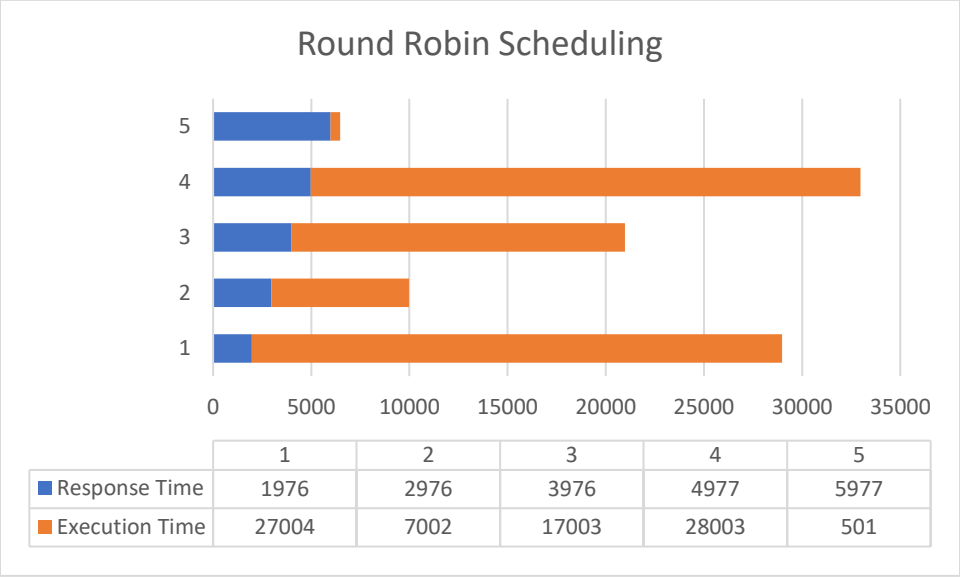
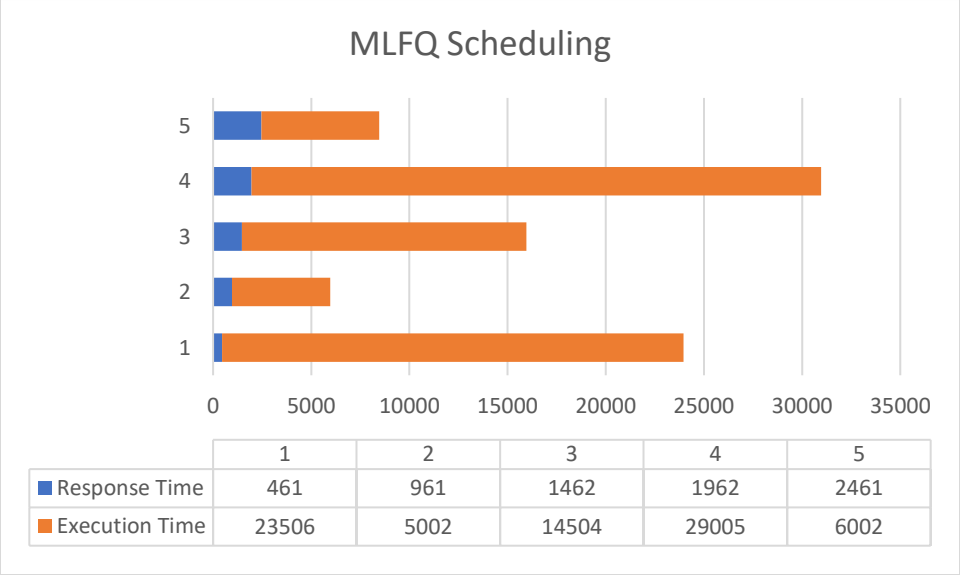
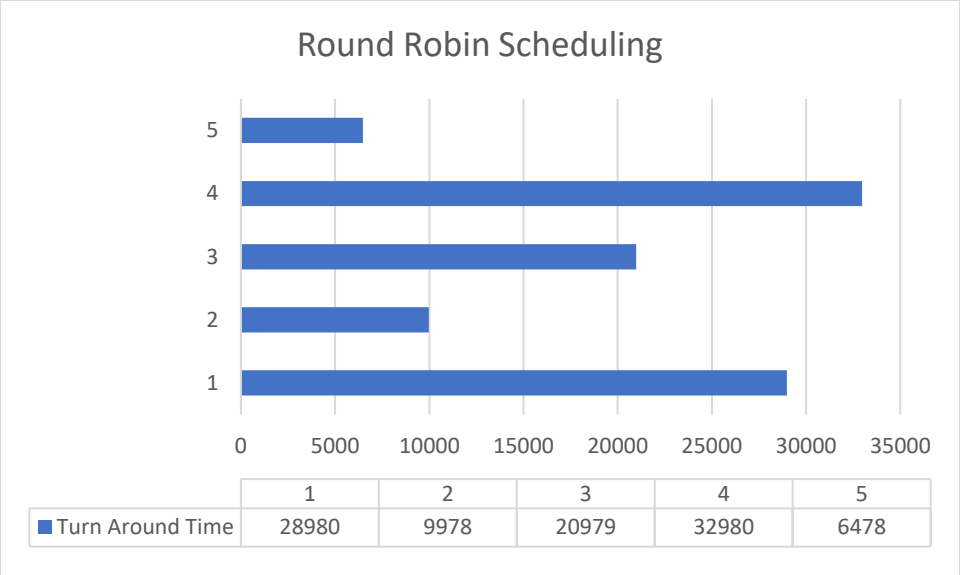
Gnatt Chart

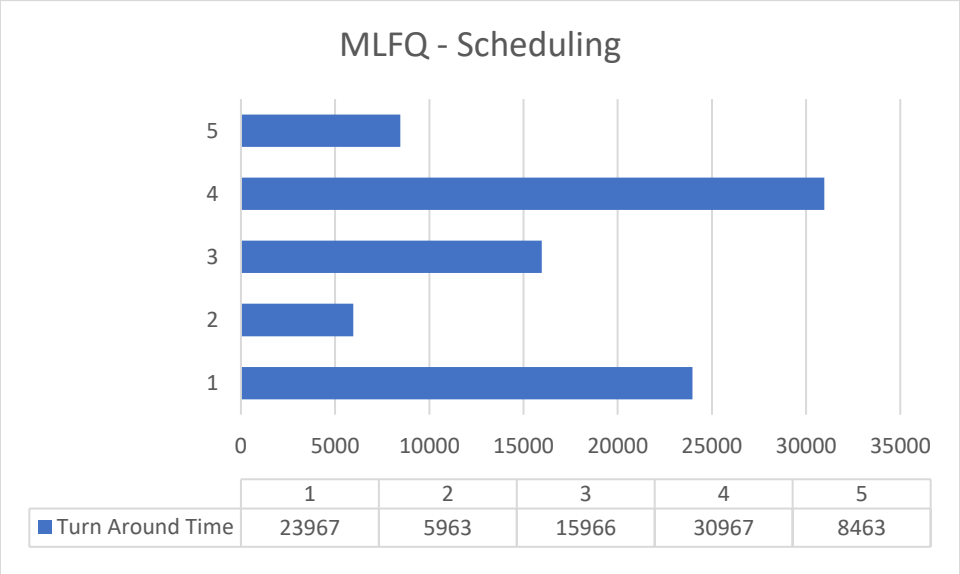


	1	2	3	4	5
Response Time	1976	2976	3976	4977	5977
Execution Time	27004	7002	17003	28003	501



	1	2	3	4	5
Response Time	461	961	1462	1962	2461
Execution Time	23506	5002	14504	29005	6002





The overall performance of the Round Robin Scheduling and the Multi-level Feedback Queue (MLFQ) Scheduling is the same. The reason being, MLFQ is also scheduled using the underlying round robin method with its time quantum slices. Therefore, the subtle advantages posed by MLFQ is very visible in the response time. MLFQ has very quick response times for all the threads because the priority one queue has a small time quantum of 500ms. Because of the round robin method of execution in MLFQ, **Thread e** is forced to finish after **Thread b** and takes significantly longer because of it. This is the result of starvation and is the one drawback of MLFQ. On the other hand, despite frequent context switches the execution time for **Thread a and Thread c** is slightly smaller. This is primarily due to the double time quantum allocation in queue 2 that lets these threads finish considerably faster.

If First Come First Serve(FCFS) Scheduling was implemented for the third queue it will not impact the over all performance by much. But There is a possibility that **Thread a** will get prioritized over **Thread c** and may finish faster. It will not impact the other three threads as **Thread b and Thread e** will have been completed in the first two queues and **Thread d** will lag behind **a and c**.