A Mini Project Report on

“Scheduling algorithm of OS with GUI”

Submitted in partial fulfillment of the requirement for the Sixth Semester

Bachelor of Engineering

In

Computer Science and Engineering

Visvesvaraya Technological University, Belgaum

Submitted by

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COMPUTER SCIENCE & ENGINEERING

Minor Project- Report
Apr 2021-Jul 2021

Course Faculty: Dr. Vindhya M

Course Name & code:
System Software 18CS6DCSSW

Semester: 6 'E'

Date: 07-08-2021

TITLE OF THE PROJECT	SCHEDULING ALGORITHMS OF OS WITH GUI			
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INDIVIDUAL CONTRIBUTION	Contributed to the JavaScript file of the project and report making.	Contributed to the html file and the JavaScript file.	Contributed to the CSS file and the ppt.	
GUIDE	Prof. Swetha M D			
PROJECT ABSTRACT:	This project aims to implement the various CPU scheduling algorithms and display a GUI with all the algorithms, so that the user can select the algorithm which he/she wants to execute by giving the arrival time and the process time. The user can add or delete the number of processes. After the calculation, a Gantt chart is displayed with the processes, also a final table with processes, arrival time, total burst time, completion time, turnaround time, waiting time and response time is displayed to the user. We have used JavaScript, HTML and CSS for the project.			
PLATFORM USED (H/W & S/W TOOLS TO BE USED	A WINDOWS SYSTEM WITH 8GB RAM AND CORE i3 AND THE CODE IS EXECUTED IN VISUAL STUDIO CODE			

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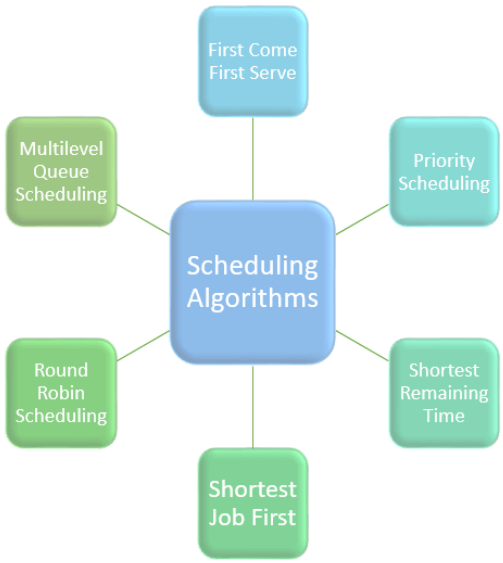
INTRODUCTION	**CPU Scheduling** is a process of determining which process will own CPU for execution while another process is on hold. A Process Scheduler schedules different processes to be assigned to the CPU based on particular scheduling algorithms. These algorithms are either **non-preemptive or preemptive**. • Preemptive Scheduling: The tasks are mostly assigned with their priorities. • Non-Preemptive Scheduling: The CPU has been allocated to a specific process. The important terminologies are Burst Time/Execution Time, Arrival Time, Finish Time, Multiprogramming, Jobs, User, Process, CPU/IO burst cycle. The Scheduling algorithm should maximise the CPU utilisation and throughput and minimise the waiting, response and turnaround time. There are mainly six types of process scheduling algorithms 1. First Come First Serve (FCFS)/First in First Out (FIFO) 2. Shortest-Job-First (SJF) Scheduling 3. Shortest Remaining Time 4. Priority Scheduling 5. Round Robin Scheduling 6. Multilevel Queue Scheduling
DESIGN	

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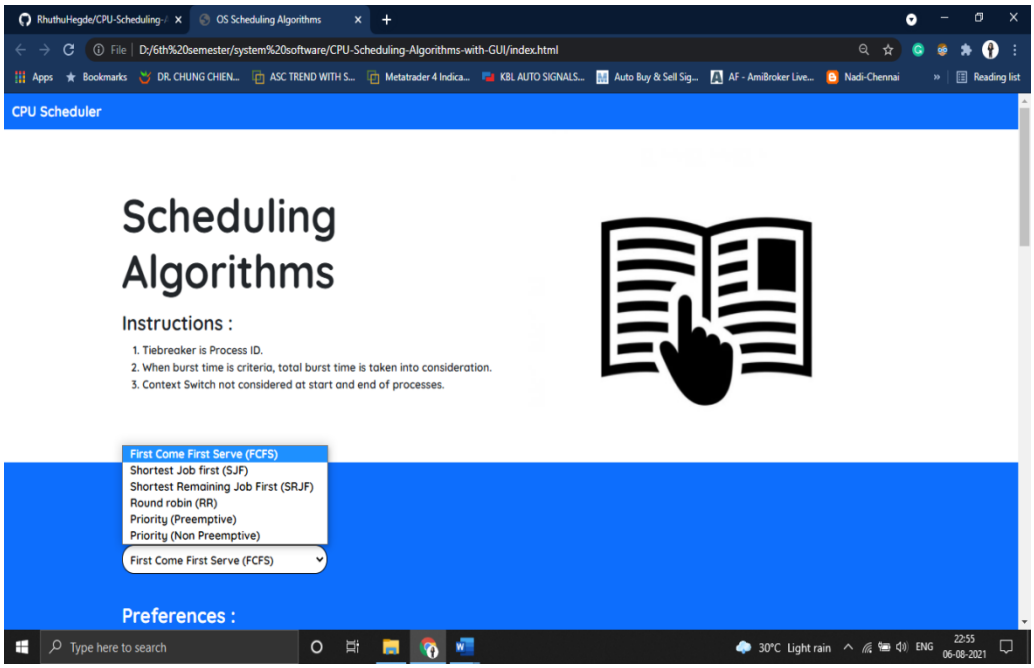
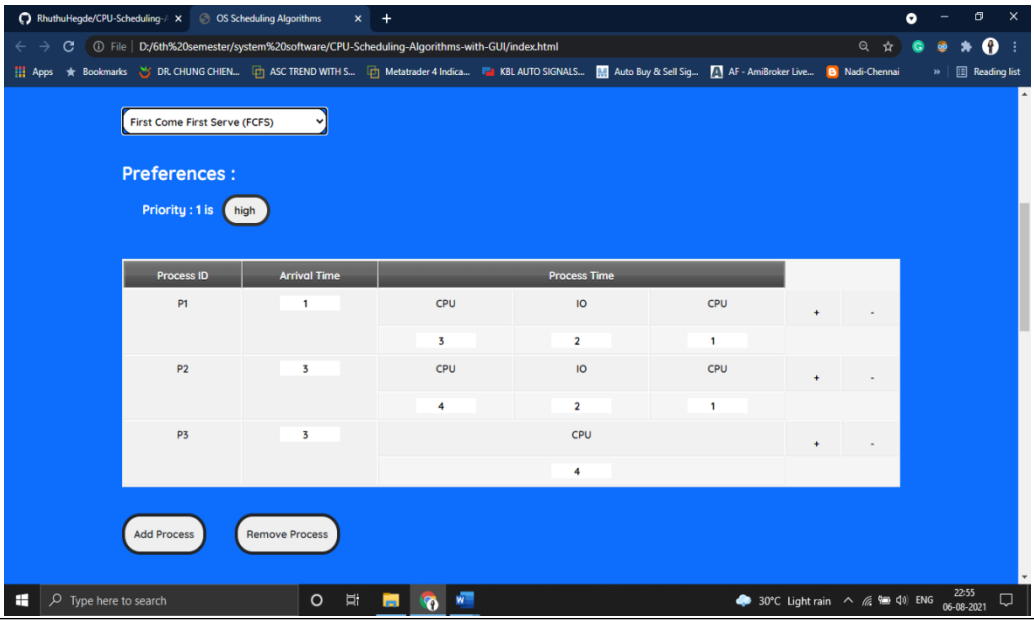
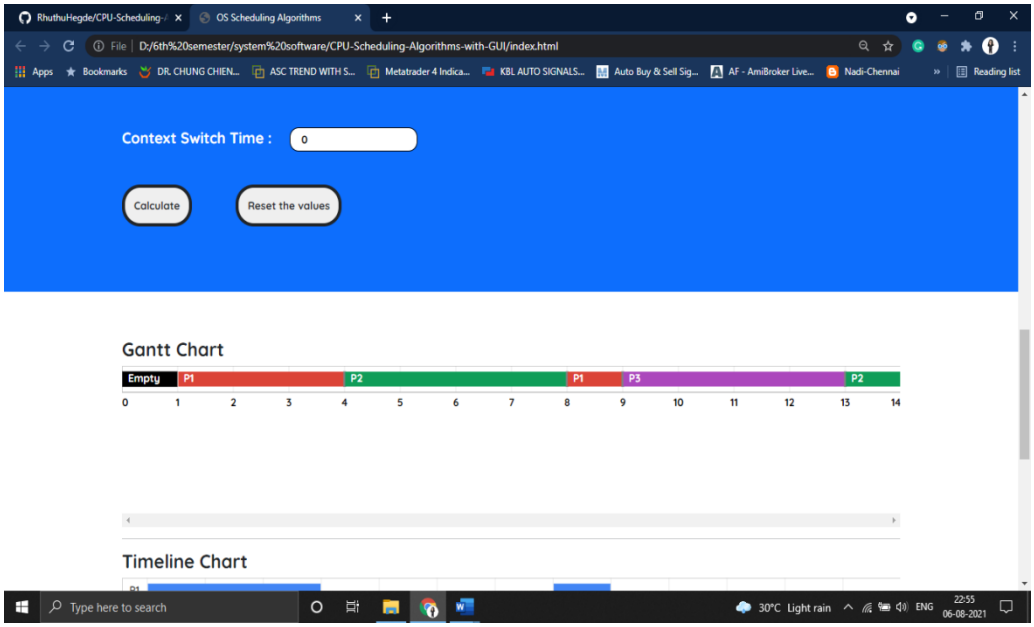
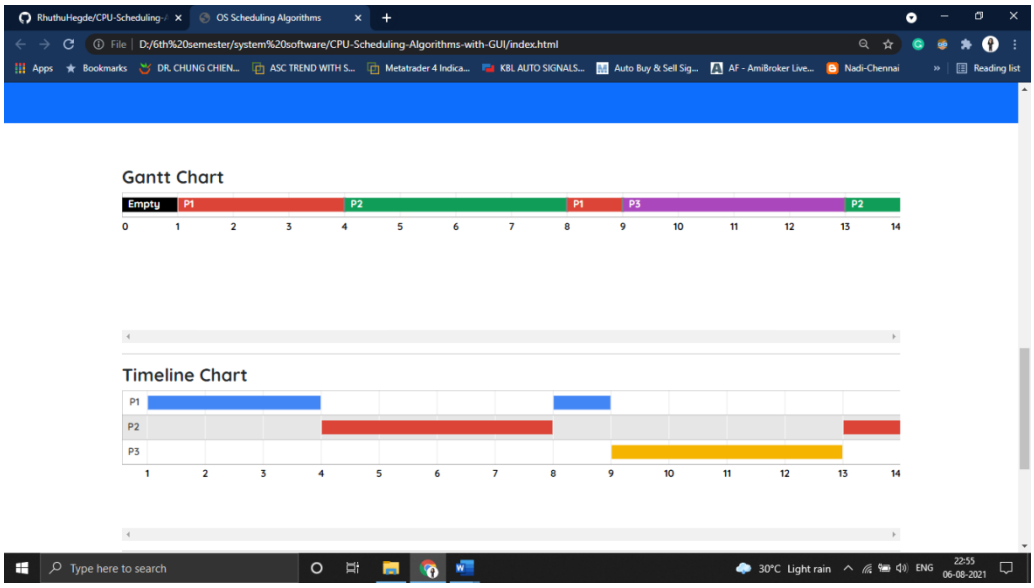
PROJECT SOURCE CODE LINK (GITHUB/ GOOGLE DRIVE)	https://github.com/RhuthuHegde/CPU-Scheduling-Algorithms-with-GUI
CONCLUSION /FUTURE ENHANCEMENT	As an enhancement feature, time log feature can be added which shows the processes step by step from ready queue, waiting state, running, and also process termination.
UI SCREENSHOTS	1. To select the CPU Scheduling algorithm.  2. Edit the CPU time and IO time as optional for the individual processes. 

3. After calculating it displays a Gantt Chart with the processes and time taken.



4. It also displays a timeline chart which gives the duration of each process.



5. A final table with names of the processes, its arrival time, total burst time, completion time, turn around time, waiting time and response time is displayed.