IT253 –OPERATING SYSTEMS

CPU SCHEDULING ALGORITHM SIMULATOR

DONE BY:

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What is CPU Scheduling?

Have you ever thought how CPU selects one process out of many processes for execution?
In a system, there are a number of processes that are present in different states at a particular time. Some processes may be in the waiting state, others may be in the running state and so on. CPU must use some kind of algorithm to select one process for its execution amongst so many processes.

CPU Scheduling is a process of determining which process will own CPU for execution while another process is on hold. The main task of CPU scheduling is to make sure that whenever the CPU remains idle, the OS at least selects one of the processes available in the ready queue for execution. The selection process will be carried out by the CPU scheduler. It selects one of the processes in memory that are ready for execution.

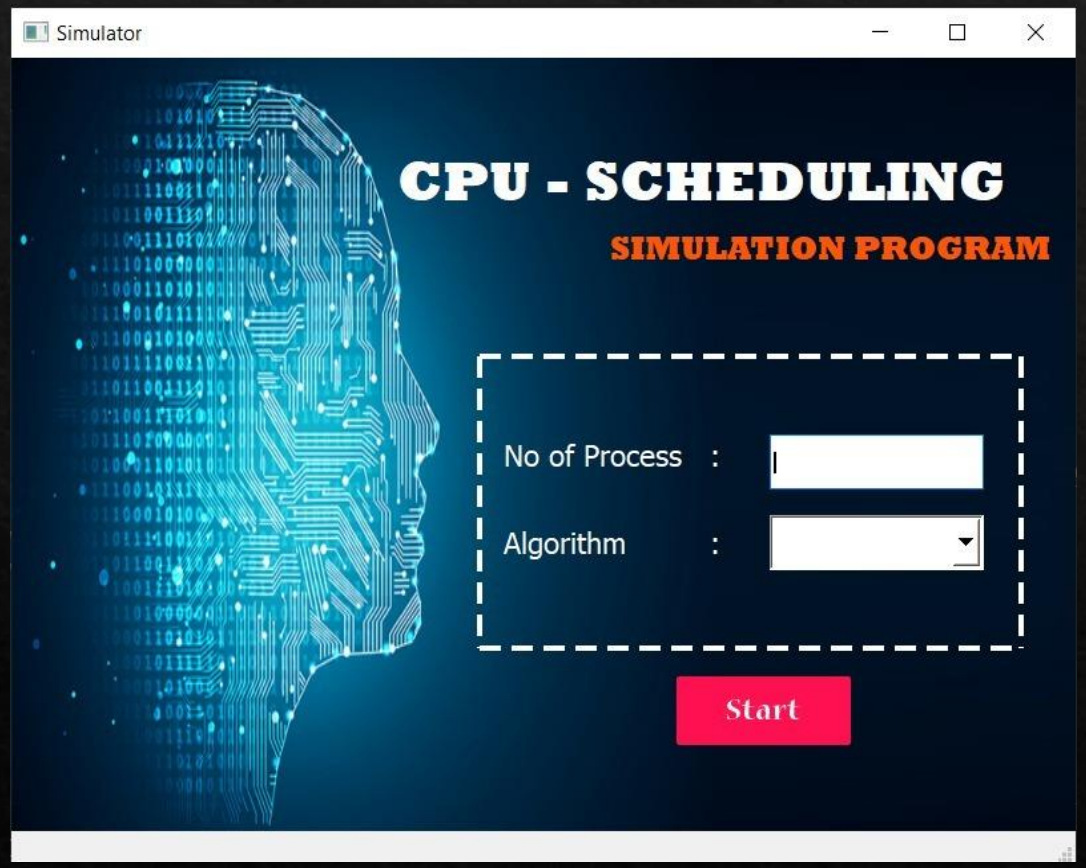
TYPES OF CPU SCEDULING ALGORITHM:

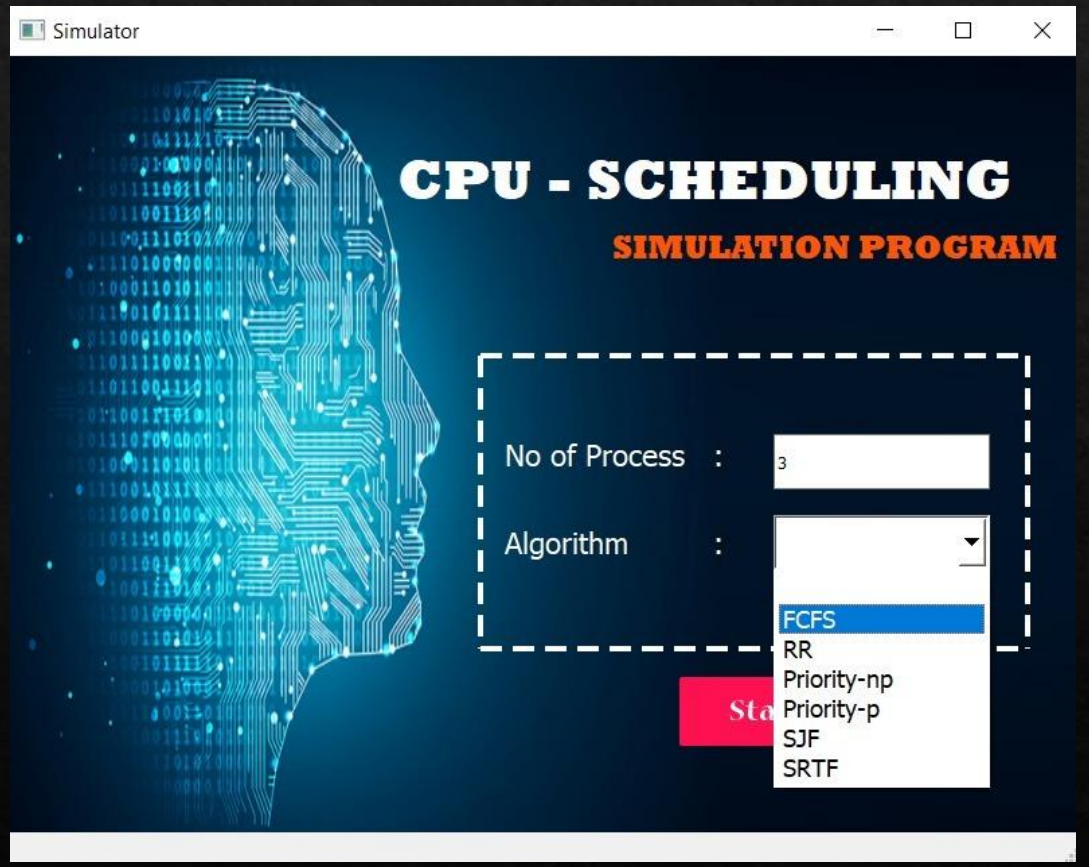
- First Come First Serve (FCFS)
- Shortest Job First (SJF)
- Shortest Remaining Job First (SRTF)
- Priority Scheduling(Preemptive and Non-preemptive)
- Round Robin
- Multilevel Queue Scheduling

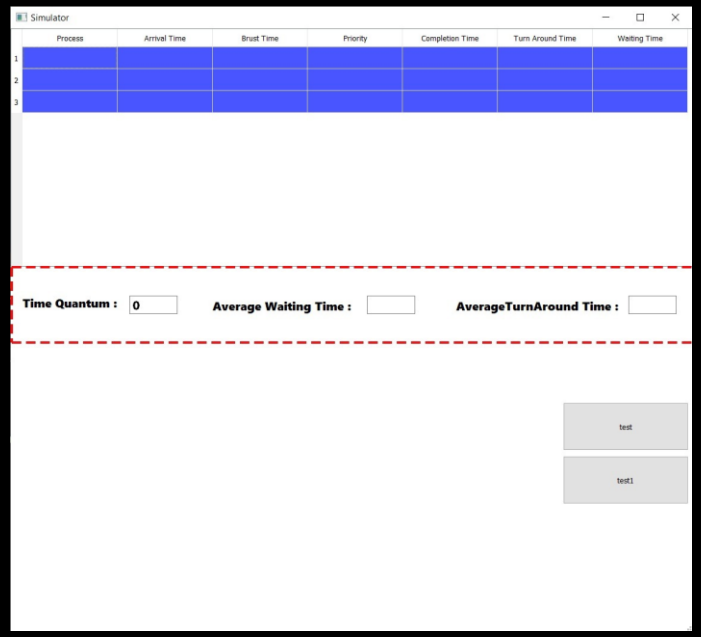
OBJECTIVES:

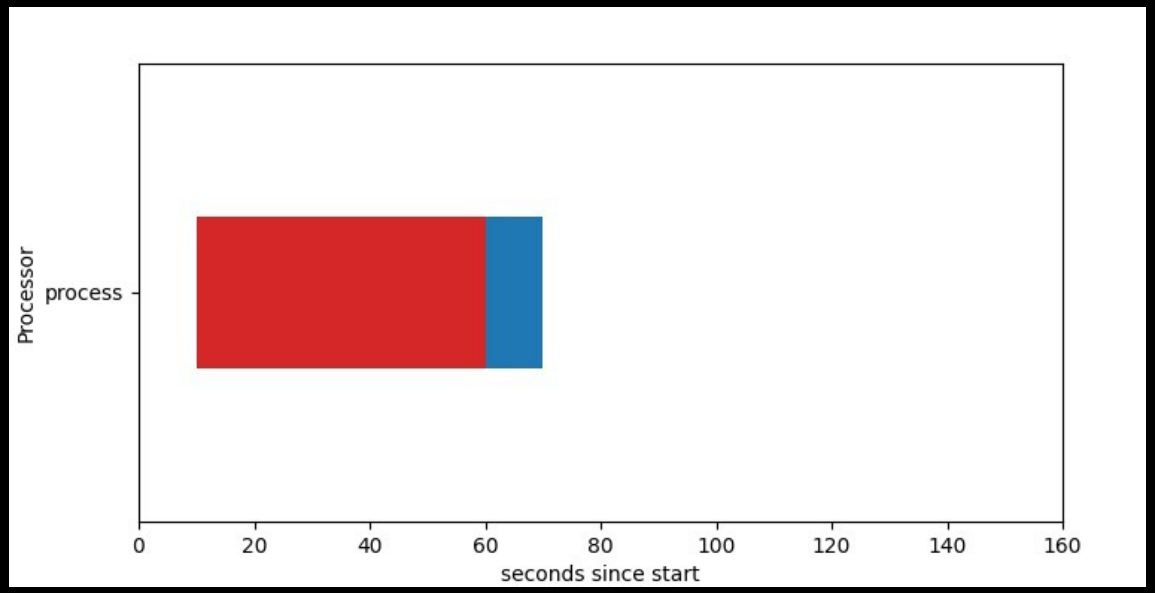
- IMPLEMENTING VARIOUS TYPES OF SCHEDULING ALGORITHMS
- DEVELOP A PYTHON BASED GUI TO TAKE USER BASED INPUTS AND DISPLAY OUTPUT
- DISPLAY GHANNT CHART FORMED AFTER THE ALGORITHM IS EXECUTED

DESIGN AND FEATURES



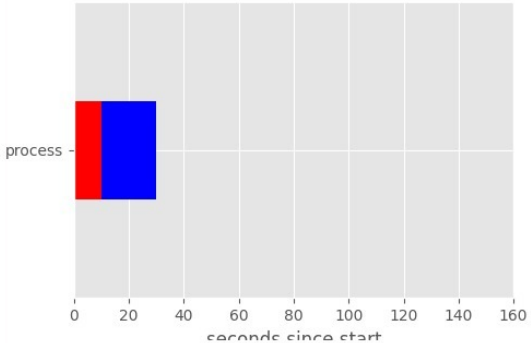






	Process	Arrival Time	Brust Time	Priority	Completion Time	Turn Around Time	Waiting Time
1	1	0	10		10	10	0
2	2	0	20		30	30	10

Time Quantum : 0 **Average Waiting Time :** 5.0 **AverageTurnAround Time :** 20.0



test

test1

Software used:

Pyqt5 : PyQt is a set of Python bindings for The Qt company's Qt application framework ,**PyQt** is a Python binding for Qt, which is a set of C++ libraries and development tools that include platform-independent abstractions for Graphical User Interfaces (**GUI**), as well as networking, threads, regular expressions, SQL databases, SVG, OpenGL, XML, and many other powerful features.

Programming languages used:

PYTHON

Libraries used:

Matplotlib, Qtcore,Qtgui, Qtwidgets, FigureCanvas, threading

WORK TO BE DONE

Gannt Chart	Creating Gannt Charts for remaining Algorithms
Improving	Improving user interface to make the app more interactive

THANK YOU