Scheduling Assistance Program for a Pediatric Office

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Overview

- Pediatric office open from 8am-8pm
- Program able to be ran throughout the day
- Two types of input
- Outputs doctors schedules
- Outputs sorted list of all patients

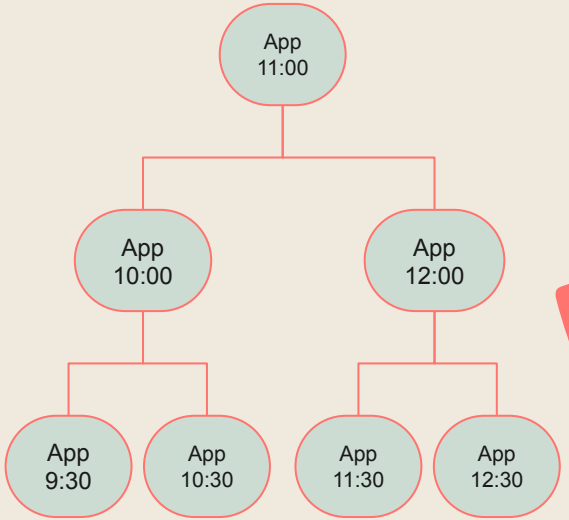
Start of day

Middle of day

End of day

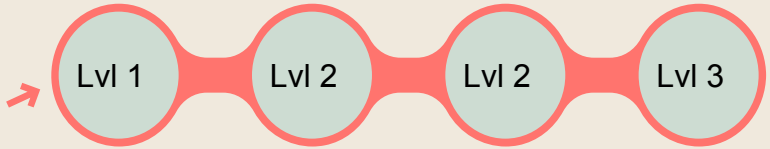
Interval Tree

- Inserting Appointments
- Overlap Checking
- Printing + Sorting Appointments
- File output and readable formatting



Priority Queue

- Manages patients based on triage level
- Dynamic Priority Queue
- Enqueue operation
- Dequeue functionality
- Efficient Resource allocation



Radix Sort

- Repeats the bucketing and collecting process
- *Sorts last and first name*
- *Processes elements digit by digit*
- Most Significant Digit (MSD) Radix Sort
- Least Significant Digit (LSD) Radix Sort

Bucket Sort

- derived from a counting sort method
- sort divides elements into bucket
- works best in tandem with another sorting algorithm
- time complexity -> O(n^2)

Strengths

Organization

Distinct Folders

Object-Oriented Programming

Sorting

Efficient Algorithms

Sorted Access

Memory

Patient Storage

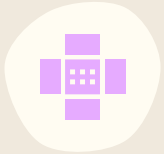
Weaknesses

Hard Coding

Little room for adjustment

Overload Management

Poor scheduling for walk-ins



Error Handling

Simple Error handling

Crashes if file is missing information

Limitations

Update Intervals

Processing by hour

Patient Data

Lacking categories

Future

‘Break’ Slots

Allow breaks in schedules

UI

Frontend interface

THANKS!

DO YOU HAVE ANY QUESTIONS?