INTRODUCING AN EFFICIENT TREAP-BASED MEDICAL REGISTRATION SYSTEM.

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GROUP E1
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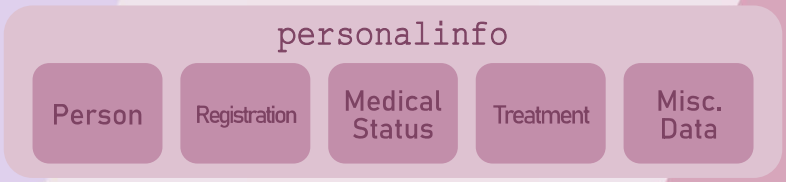
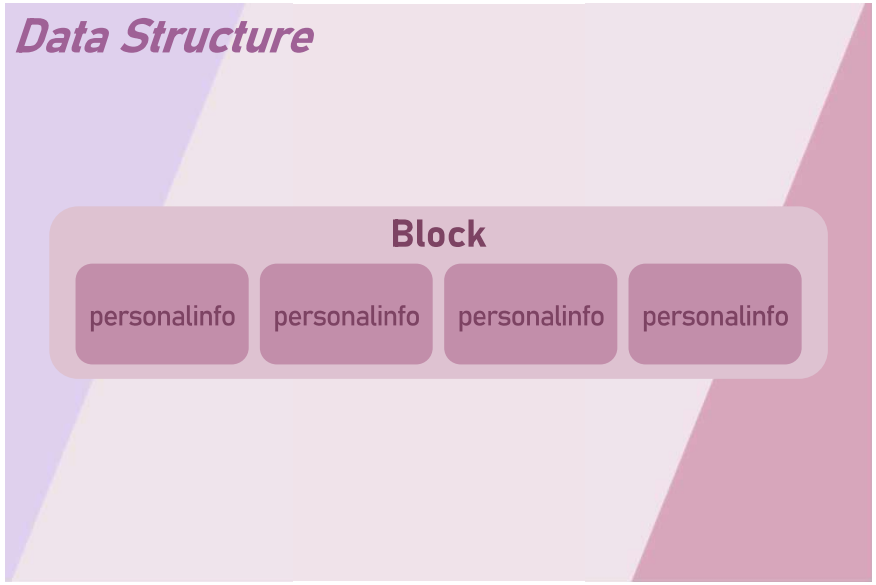
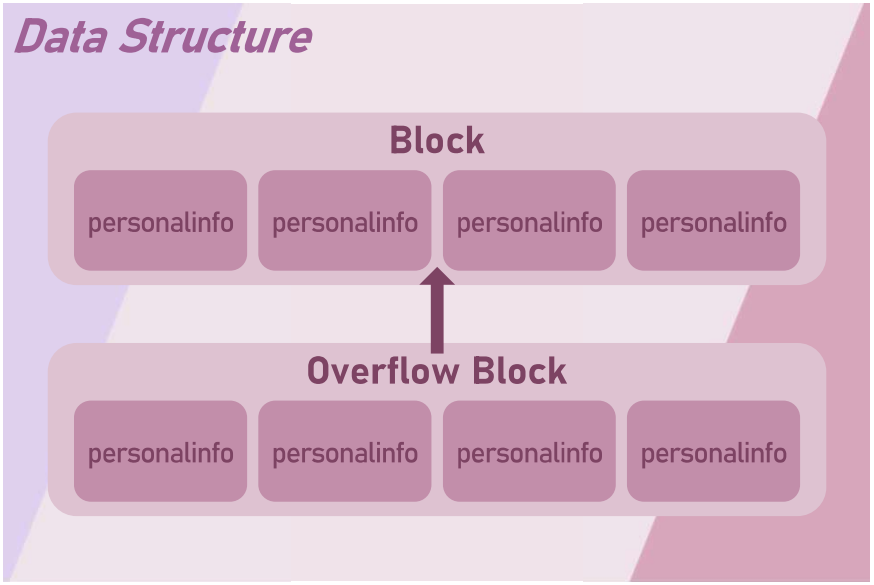
PART 1
Data Structure

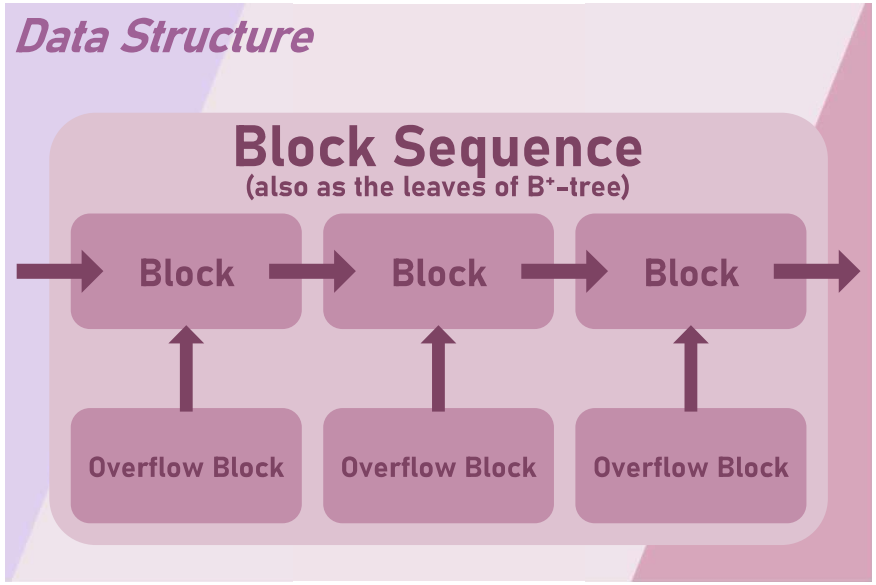
System Architecture
Operations

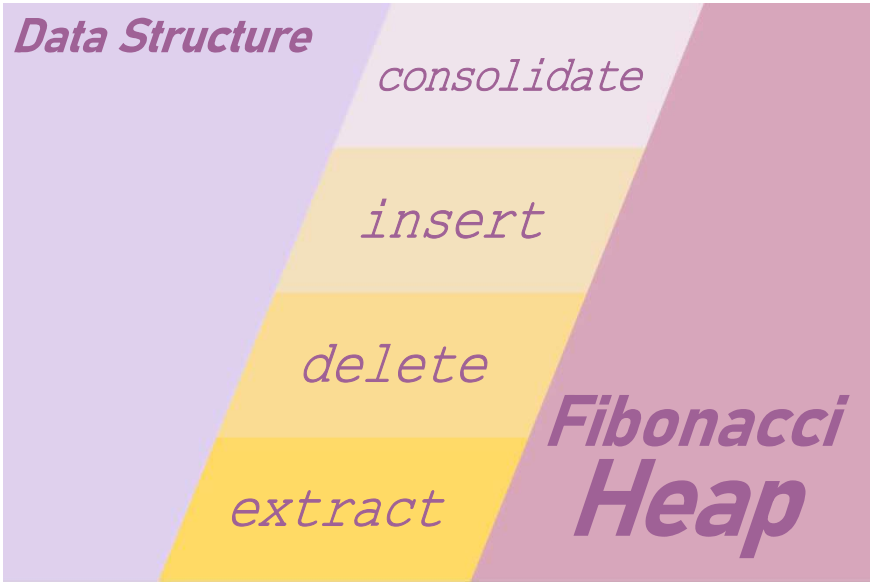
Data Structure




Data Structure
Block
personalinfo
personalinfo
personalinfo
personalinfo


Data Structure
Block
personalinfo
personalinfo
personalinfo
personalinfo
Overflow Block
personalinfo
personalinfo
personalinfo
personalinfo


Data Structure
Block Sequence
(also as the leaves of B+-tree)
Block
Block
Block
Overflow Block
Overflow Block
Overflow Block


Data Structure
consolidate
insert
delete
extract
Fibonacci
Heap

Data Structure

B+-Tree

find_id

search

split

overflow block

insert

merge

delete

B-Tree

Data Structure

B+-Tree

Secondary Key
|K| = |C| + 1

KEY DIFFERENCE?

Primary Key
Linked Leaves

B-Tree

Data Structure

PART 2
System Architecture

Operations

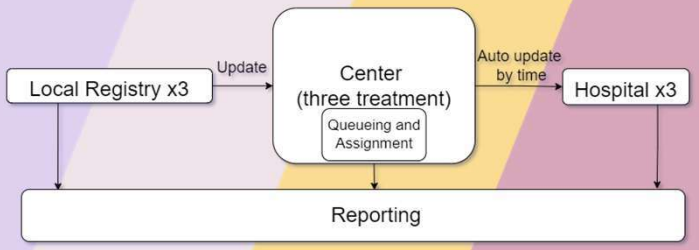
System Architecture

REGISTER (INPUT)

QUERY (SEARCH)

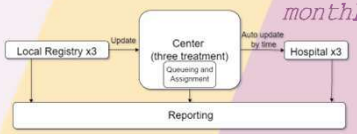
APPOINT (DISTRIBUTE)

REPORT (OUTPUT)



System Architecture

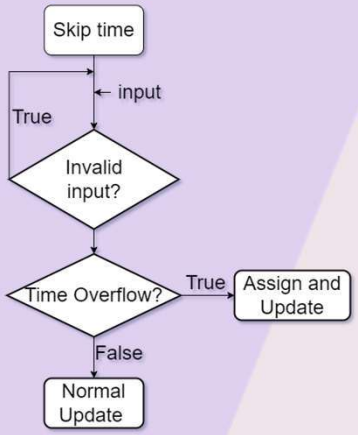
REGISTER (INPUT)	QUERY (SEARCH)	APPOINT (DISTRIBUTE)	REPORT (OUTPUT)
personalinfo (Auto/Manual)	BPlusTree BTree FibHeap BlockSeq etc.	hospital	report weekly_report.csv monthly_report.csv



Data Structure
System Architecture

PART 3
Operations

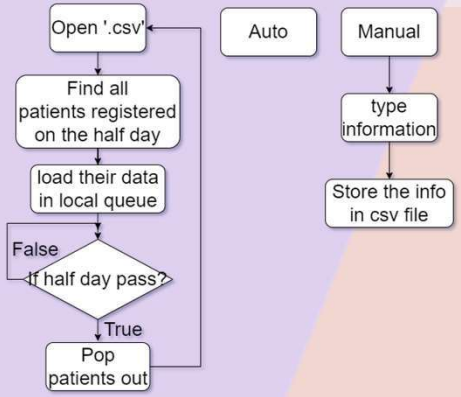
Skip Time



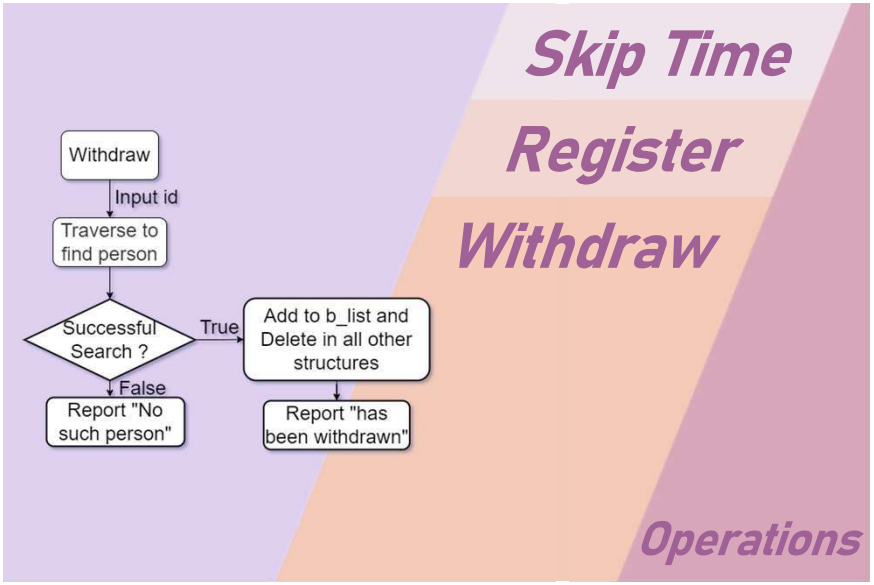
Operations

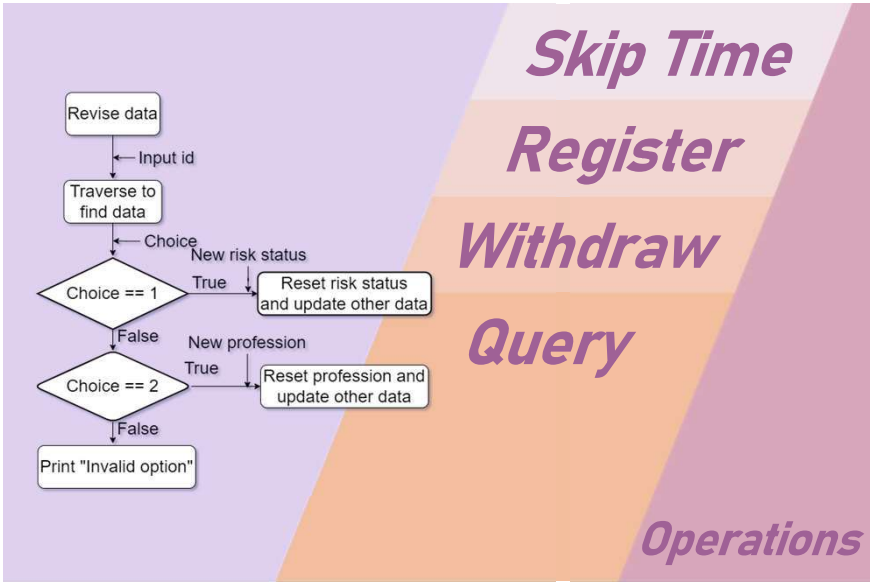
Skip Time

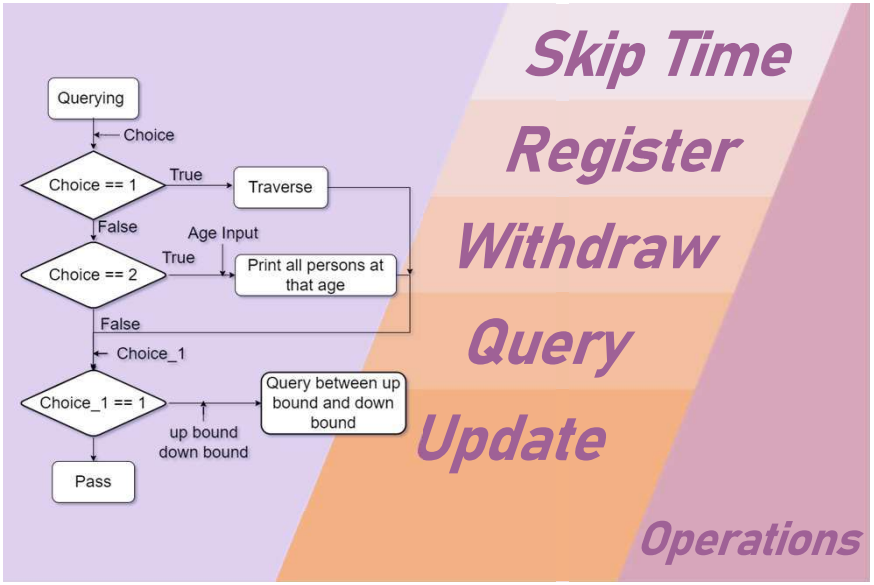
Register

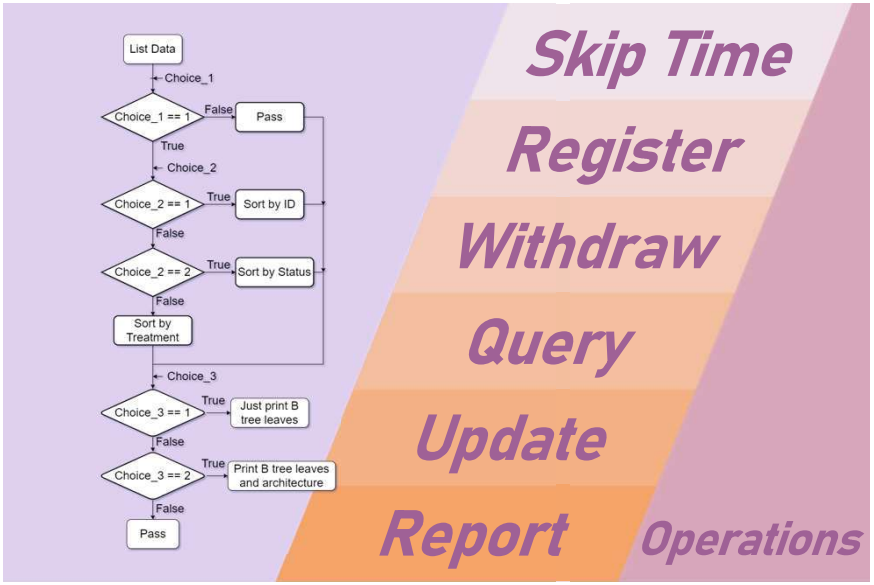


Operations


Withdraw
Input id
Traverse to find person
Successful Search ?
True
Add to b_list and Delete in all other structures
False
Report "No such person"
Report "has been withdrawn"
Skip Time
Register
Withdraw
Operations


Revise data
Input id
Traverse to find data
Choice
New risk status
Choice == 1
True
Reset risk status and update other data
False
New profession
Choice == 2
True
Reset profession and update other data
False
Print "Invalid option"
Skip Time
Register
Withdraw
Query
Operations


Querying
Choice
Choice == 1
True
Traverse
False
Age Input
Choice == 2
True
Print all persons at that age
False
Choice_1
Choice_1 == 1
Query between up bound and down bound
up bound
down bound
Pass
Skip Time
Register
Withdraw
Query
Update
Operations


List Data
Choice_1
Choice_1 == 1
False
Pass
True
Choice_2
Choice_2 == 1
True
Sort by ID
False
Choice_2 == 2
True
Sort by Status
False
Sort by Treatment
Choice_3
Choice_3 == 1
True
Just print B tree leaves
False
Choice_3 == 2
True
Print B tree leaves and architecture
False
Pass
Skip Time
Register
Withdraw
Query
Update
Report
Operations

DEMO TIME!

INTRODUCING AN EFFICIENT TREE-BASED MEDICAL REGISTRATION SYSTEM.

THANKS FOR LISTENING