

Table Name	Query# and Type	Search Key	Query Frequency	Selected File Organization	Justifications	Selected File Organization
PERSON	2) Random Search	SSN	1/week	Extendable Hashing with hash key SSN	Since we are performing Random Search's on SSN of table and some times we might be inserting data as it is master table for Client, Volunteer, Employee and Donor	No indexing is required as SSN is primary key and index on it is created by default
	3) Random Search	SSN	2/month			
	5) Random Search	SSN	1/year			
	8) Random Search	SSN	1/day			
	13) Random Search	SSN	1/week			
	14) Random Search	SSN	1/week			
CLIENT	2) Insert		1/week	Extendable Hashing with hash key SSN	Because of frequency of Insertion and Random Search	No indexing is required as SSN is primary key and index on it is created by default
	2) Random Search	SSN	> 1/week			
	10) Random Search	SSN	1/week			
	17) Deletion	SSN	4/year			
VOLUNTEER	3) Insert		2/month	Extendable Hashing with hash key SSN	Because of frequency of Insertion and Random Search	No indexing is required as SSN is primary key and index on it is created by default
	3) Random Search	SSN	> 2/month			
EMPLOYEE	5) Insert		1/year	Sequential File organization and B+ tree index on SSN	Since Insertion is less frequent and random search is frequent	No indexing is required as SSN is primary key and index on it is created by default
	5) Random Search	SSN	> 1/year			
	6) Random Search	SSN	1/day			
	14) Random Search	SSN	1/week			
	16) Update	SSN	1/year			
DONOR	8) Insert		1/day	Extendable Hashing with hash key SSN	Because of frequency of Insertion and Random Search	No indexing is required as SSN is primary key and index on it is created by default
	8) Random Search	SSN	> 1/day			
	14) Random Search	SSN	1/week			
EMERG_CONTACT				HEAP	As we are not using this table in any of our queries	No Indexing
INSURANCE_POLICY	17) Random Search	Policy_Type	4/year	Indexed sequential file with B+ index on policy_type and on SSN	Frequency of query is very less, so using Indexed sequential file with B+ tree	By default Primary index is created on Policy_Id, creating secondary index on Policy_Type and another
	17) Deletion	SSN	4/year			
NEEDS	17) Random Search	Need_Type, Importance	4/year	Indexed sequential file with two search key's on (Need_type, Importance) and SSN	Frequency of query is very less, both search keys are non candidate keys so	Creating Secondary index on Need_Type, Importance and another secondary index on SSN
	17) Deletion	SSN	4/year			
TEAMS	1) Insert		1/month	Sequential File organization and B+ tree index on NAME and on Formation Date	Because of frequent insertion, random search and range search	By default primary index is created on Name, so creating secondary index on Formation_Date
	2) Random Search	Name	> 1/week			
	3) Random Search	Name	> 2/month			
	5) Random Search	Name	> 1/year			
	7) Random Search	Name	> 2/week			

	15) Range Search	Formation Date	1/month			
EXPENSES	6) Insert		1/day	Sequential File organization and B+ tree index on Date	Because of Range Search	Creating Secondary index on Date
	11) Range Search	Date	1/month			
DONOR_DONATIONS	8) Insert		> 1/day	Extendable Hashing with hash key on Primary Key Columns and on SSN	Because of frequency of Insertion and Random Search	Primary index is already created on primary key, so creating secondary index on SSN
	8) Random Search	Primary Key (SSN, Date, Amount, Campaign Name,	> 1/day			
	14) Random Search	SSN	1/week			
DONOR_DONATIONS_CHECK	8) Insert		> 1/day	HEAP	As we are only inserting records	No Indexing
DONOR_DONATIONS_CARD	8) Insert		> 1/day	HEAP	As we are only inserting records	No Indexing
ORGANIZATION	7) Insert		2/week	Extendable Hashing with hash key NAME	Because of frequency of Insertion and Random Search	No Indexing required as Name is primary key
	7) Random Search	Name	> 2/week			
	9) Insert		1/day			
	9) Random Search	Name	> 1/day			
CHURCH	7) Insert		2/week	HEAP	As we are only inserting records	No Indexing
	9) Insert		1/day			
BUSINESS	7) Insert		2/week	HEAP	As we are only inserting records	No Indexing
	9) Insert		1/day			
ORG_DONATIONS	9) Insert		1/day	Extendable Hashing with hash key Primary Key Cols and on NAME	Because of frequency of Insertion and Random Search	No Indexing required as it is already created on Primary Key
	9) Random Search	Primary Key (name, Date, Amount, Campaign Name, Email)	> 1/day			
ORG_DONATIONS_CHECK	9) Insert		> 1/day	HEAP	As we are only inserting records	No Indexing
ORG_DONATIONS_CARD	9) Insert		> 1/day	HEAP	As we are only inserting records	No Indexing
CARES	2) Insert		> 1/week	Extendable Hashing with hash key NAME and on SSN	Because of frequency of Insertion and Random Search	Creating Secondary index on Name and another secondary index on SSN
	12) Random Search	SSN	4/year			
	13) Random Search	Name	1/week			
	17) Deletion	SSN	4/year			
SERVES	3) Insert		> 2/month	Extendable Hashing with hash key on Primary Key columns and on SSN	Because of frequency of Insertion and Random Search	Primary Index is already created on primary key, so creating secondary index on Name
	4) Random Search	Primary Key (SSN and NAME)	30/month			
	12) Random Search	Name	4/year			
WORK	4) Insert		30/month	HEAP	As we are only inserting records	No Indexing

LEADER				HEAP	As we are not using this table in any of our queries	No Indexing
SPONSOR	7) Insert		> 2/Week	Sequential File organization and B+ tree index on Ogr_Name	Because of Range Search	Creating secondary index on Org_Name as primary index is already created on Primary key
	13) Range Search	Org_Name	1/week			
REPORTS	5) Insert		> 1/year	HEAP	As we are mainly inserting records and using in Group By which inturn access all	Creating secondary index on SSN as primary index is already created on Primary key
	16) Search (Group By)	SSN	4/year			