Implementation of VFAR

There will be 4 Major Components in VFAR Implementation:

1. CRUD Basic Operation

This component will have basic CRUD (Create, Read, Update, Delete) operation and will be used by ECRUD Component to create ASUM and and ASM.

	Site1			Site2			Site3			Site4			Site5			Site6			Site7			Site8		
AP / Attribute	AP1	AP2	AP3	AP1	AP2	AP3	AP1	AP2	AP3	AP1	AP2	AP3	AP1	AP2	AP3	AP1	AP2	AP3	AP1	AP2	AP3	AP1	AP2	AP3
A	C	R	U	.	.	.	.	.	.	.	.	.	R	R	D	C	U	R	.	.	.	.	.	.
B	.	.	.	C	CR	D	.	.	.	RU	CU	D	CRU	R	D	.	.	.	.	.	.	.	.	.
C	.	.	.	CRU	R	D	.	.	.	.	.	.	CR	D	U	.	.	.	UD	R	R	R	R	U
D	.	.	.	.	.	.	C	R	U	.	.	.	.	.	.	.	.	.	.	.	.	C	R	D
E	U	D	R	.	.	.	.	.	.	.	.	.	C	R	UD	R	R	U	.	.	.	.	.	.
F	.	.	.	.	.	.	C	R	D	.	.	.	.	.	.	.	.	.	–	.	.	C	U	D
G	U	D	R	.	.	.	.	.	.	C	U	D	C	R	D	.	.	.	.	.	.	.	.	.
H	.	.	.	C	R	D	.	.	.	D	D	R	C	R	U	.	.	.	.	.	.	.	.	.
I	.	.	.	C	R	D	.	.	.	.	.	.	C	R	UD	.	.	.	CRU	CRU	R	R	R	D
J	.	.	.	.	.	.	C	R	U	.	.	.	.	.	.	.	.	.	.	.	.	C	R	D

2. ECRUD

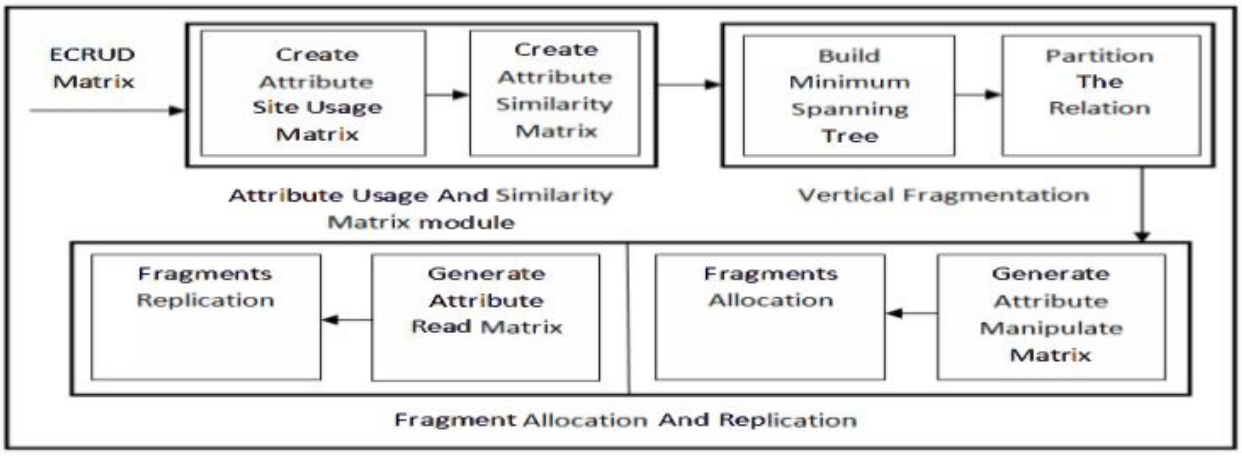
This component is used to create ASUM and and ASM Matrices. The output of this component will be input for Vertical Fragmentation component.

Attribute / Site	A	B	C	D	E	F	G	H	I	J
Site1	1	0	0	0	1	0	1	0	0	0
Site2	0	1	1	0	0	0	0	1	1	0
Site3	0	0	0	1	0	1	0	0	0	1
Site4	0	1	0	0	0	0	1	1	0	0
Site5	1	1	1	0	1	0	1	1	1	0
Site6	1	0	0	0	1	0	0	0	0	0
Site7	0	0	1	0	0	0	0	0	1	0
Site8	0	0	1	1	0	1	0	0	1	1

Attribute / Attribute	A	B	C	D	E	F	G	H	I	J
A	0	1	1	0	3	0	2	1	1	0
B	1	0	2	0	1	0	2	3	2	0
C	1	2	0	1	1	1	1	2	4	1
D	0	0	1	0	0	2	0	0	1	2
E	3	1	1	0	0	0	2	1	1	0
F	0	0	1	2	0	0	0	0	1	2
G	2	2	1	0	2	0	0	2	1	0
H	1	3	2	0	1	0	2	0	2	0
I	1	2	4	1	1	1	1	2	0	1
J	0	0	1	2	0	2	0	0	1	0

3. Vertical Fragmentation

This is the main component of VFAR Implementation. This will take Attribute Usage and similarity Matrix as input created from ECRUD matrix and builds a minimum spanning tree and ran its algorithm to create partition of the relation.



4. Prims (Modified for our need)
   This component will be used by Vertical Fragmentation component to create minimum spanning tree with Prim's Algorithm using binary heap.