Semantic Object Modeling

DMS-KFS

1. Person

Field	Required	Data Type	Domain	Unique
First Name	YES	String	Between 3 and 17 character	False
Middle Name	NO	String	Between 3 and 30 character	False
Last Name	YES	String	Between 3 and 17 character	False
Password	YES	String	Between 10 to 40 chars	False
Contacts	YES	Contacts Ref	Email COLUMN	True
Academic Number	YES	String	Digits only 16 or so in length (Needs revision)	True
City	YES	City Reference	Shortcut COLUMN	False

2. City

Field	Required	Data Type	Domain	Unique
Name	YES	String	Between 3 and 25 characters	True
Shortcut	YES	String	Between 3 and 5 characters	True
Postal Code	YES	Integer	Valid Postal Code for each city	True

3.   Person Contacts

Field	Required	Data Type	Domain	Unique
Email	YES	String-Email	Valid Email To Contact	True
Phone Number(Primary)	YES	String	11 digits valid phone number-	True
PHD certificate	NO	String	String describe the certificate	False
Image Href	NO	String	Image to be loaded in the profile	True
Bio	NO	String		FALSE

4. Person Roles

Field	Required	Data Type	Domain	Unique
Person	YES	Person Ref	Person ID COLUMN	True
Employee Title	YES	Employees Hierarchy Ref	Employees Hierarchy Title COLUMN	False
Institution	YES	Institution Ref	Institution ID COLUMN	False
Hiring Date	YES	Date		False
Active	YES	BOOLEAN		False

5. Person Permissions

Field	Required	Data Type	Domain	Unique
Bit	YES	INT	2**n as binary values	True
Name	YES	String		True

6.   Employees Hierarchy

Field	Required	Data Type	Domain	Unique
Title	YES	STRING		TRUE
Priority Level	YES	INT		FALSE
Permission Level	YES	INT-it's not a direct foreign but it will be compared to the employee permissions	The Sum Of the permissions granted to this role Example-> the president will have the maximum permissions	FALSE
Job Description	NO	STRING		FALSE

7.   Person Action Logs

Field	Required	Data Type	Domain	Unique
Affecter Person	YES	Person Ref	Person ID COLUMN The one with the action	FALSE
Affected Person	YES	Person Ref	Person ID COLUMN The one takes the action	FALSE
Action Date	YES	DATETIME		FALSE
Permission Action Performed	YES	Person Permission Ref	Person Permission BIT COLUMN	FALSE

8.   Notification Types

Field	Required	Data Type	Domain	Unique
Name	YES	STRING	Entity+Operation Type Example-> FILE_ADDED	TRUE

9. Person Notifications

Field	Required	Data Type	Domain	Unique
Person ID	YES	Person REF	Person ID COLUMN	False
Notification Type	YES	Notification Types REF	Notification Type NAME COLUMN	FALSE
Seen	YES	BOOLEAN		FALSE
File ID	YES	File Ref	File ID COLUMN	FALSE
Notification maker Person	YES	Person REF	Person ID COLUMN	FALSE
Date Created	YES	DATETIME		FALSE

10. Institution

Field	Required	Data Type	Domain	Unique
Name	YES	String	Valid Faculty Name	True
Institution ID	YES	Integer	Auto Generated	True
Inside Campus	YES	Boolean	Physical Location	False
Institution Contacts	YES	Institution Contacts Ref	Website URL COLUMN	True
Active	YES	Boolean	Status flag	False

11. Institution Contacts

Field	Required	Data Type	Domain	Unique
Website URL	YES	String	Valid Faculty Website	True
Primary phone	NO	String		False
Secondary Phone	NO	String		False
Fax	NO	String		False
Email	NO	String		False

12. Folder

Field	Required	Data Type	Domain	Unique
Folder ID	YES	Integer	Auto increment	True
Parent Folder	YES	Folder Ref	Folder ID COLUMN	False
Date Created	YES	Date	.	False
Author	YES	Person-Ref	Person ID COLUMN	False
Current Version	YES	Folder Version Ref	Version ID COLUMN	True

13. Folder Version

Field	Required	Data Type	Domain	Unique
Version ID	YES	Integer	Auto Increment	True
Version Name	YES	String	Valid String name from 4 to 50 chars	False
Version Notes	NO	String	Descriptive String for the version from 0 to 255	False
Version Number	No	Float	Represents the version	False
Folder ID	YES	Folder Ref	Folder ID COLUMN	True
Date Created	YES	Date		False
Author	YES	Person-Ref	Person ID COLUMN	False

14. File

Field	Required	Data Type	Domain	Unique
File ID	YES	Integer	Auto increment	True
Parent Folder	YES	Folder Ref	Folder ID COLUMN	False
Date Created	YES	Date		False
Author	YES	Person-Ref	Person ID COLUMN	False
Current Version	YES	File Version ID	Version ID COLUMN	True

15. File Type

Field	Required	Data Type	Domain	Unique
Type Name	YES	String	Valid String name from 4 to 50 chars	True
Extension	YES	String	String begins with . and 2 or more chars 2-10	True

16. File Versions

Field	Required	Data Type	Domain	Unique
File ID	YES	File Ref	File ID COLUMN	False
Version ID	YES	Integer	Auto Increment	True
Version Notes	NO	String	Descriptive String for the version from 0 to 255	False
Version Name	YES	String	String from 4 to 50 chars	False
Version Number	No	Float	Represents the version	False
Date Created	YES	Date		False
Author	YES	Person-Ref	Person ID COLUMN	False
File Content	YES	File Content Ref	File Content ID COLUMN	True
File Type	YES	File Type Ref	Type Name COLUMN	False

17. File Content

Field	Required	Data Type	Domain	Unique
ID	YES	INT	PK	TRUE
Href	YES	String	String representing the URL of the file	True if file name included false otherwise
File Size	YES	INT		FALSE

18. Person-Folder Roles

Field	Required	Data Type	Domain	Unique
Person ID	YES	Person Ref		False
File ID	YES	Folder Ref		False
Folder Permissions Bit	YES	INT	The sum of the bits of the granted permissions	False
EXP-Date	YES	Date		False

19. Person-File Roles

Field	Required	Data Type	Domain	Unique
Person ID	YES	Person Ref		False
File ID	YES	File Ref		False
File Permissions Bit	YES	INT	The sum of the bits of the granted permissions	False
EXP-Date	YES	Date		False

20. File Permissions

Field	Required	Data Type	Domain	Unique
Bit	YES	INT		True
Name	YES	String		True

21. Folder Permissions

Field	Required	Data Type	Domain	Unique
Bit	YES	INT		True
Name	YES	String		True