Chapter 10

Implementational Details

10.1 SQL

10.1.1 Tables

FilesIn

CREATE TABLE [FilesIn](
    [FileID] [int] IDENTITY(1,1) NOT NULL,
    [Url] [varchar](1024) NOT NULL,
    [Title] [varchar](256) NOT NULL,
    [Description] [varchar](512) NOT NULL,
    [CrawledDate] [datetime] NOT NULL,
    [Size] [bigint] NOT NULL,
    [Mime] [varchar](150) NOT NULL,
    [Extension] [varchar](64) NOT NULL,
    [Username] [nvarchar](256) NOT NULL,
    [IsLocal] [bit] NOT NULL

CONSTRAINT [PK_FilesIn] PRIMARY KEY([FileID]),
CONSTRAINT [FK_FilesIn_KBSEC_Users] FOREIGN KEY([UserName])
REFERENCES [KBSEC_Users] ([UserName])

KBSEC_Users

CREATE TABLE [KBSEC_Users]
(
    [UserId] [uniqueidentifier] NOT NULL,
    [UserName] [nvarchar](256) NOT NULL,
    [SecurityQuestion] [varchar](256) NOT NULL,
    [SecurityAnswer] [varchar](256) NOT NULL,
    CONSTRAINT [PK_KBSEC_Users] PRIMARY KEY([UserName]),
    CONSTRAINT [FK_KBSEC_Users_aspnet_Users] FOREIGN KEY([UserId])
REFERENCES [aspnet_Users] ([UserId])
)

Notes

CREATE TABLE [KBSEC_Users]
(
    [UserId] [uniqueidentifier] NOT NULL,
    [UserName] [nvarchar](256) NOT NULL,
    [SecurityQuestion] [varchar](256) NOT NULL,
    [SecurityAnswer] [varchar](256) NOT NULL,
    CONSTRAINT [PK_KBSEC_Users] PRIMARY KEY([UserName]),
    CONSTRAINT [FK_KBSEC_Users_aspnet_Users] FOREIGN KEY([UserId])
REFERENCES [aspnet_Users] ([UserId])
)
Message

CREATE TABLE [Messages](
    [MessageID] [int] IDENTITY(1,1) NOT NULL,
    [From] [nvarchar](256) NOT NULL,
    [To] [nvarchar](256) NOT NULL,
    [DateSent] [datetime] NOT NULL,
    [Content] [varchar](512) NOT NULL,
    CONSTRAINT [PK_Messages] PRIMARY KEY([MessageID],[From]),
    CONSTRAINT [FK_Messages_KBSEC_From] FOREIGN KEY([From])
    REFERENCES [KBSEC_Users] ([UserName]),
    CONSTRAINT [FK_Messages_KBSEC_To] FOREIGN KEY([To])
    REFERENCES [KBSEC_Users] ([UserName]))

Index

CREATE TABLE [Index](
    [FileID] [int] NOT NULL,
    [Word] [varchar](256) NOT NULL,
    [Position] [smallint] NOT NULL,
    [Count] [smallint] NOT NULL CONSTRAINT [DF_Index_Count] DEFAULT ((1)),
    CONSTRAINT [FK_Index_FilesIn] FOREIGN KEY([FileID])
    REFERENCES [FilesIn] ([FileID]),
    CONSTRAINT [PK_Index] PRIMARY KEY([FileID],[Word]))
DeadLinks

CREATE TABLE [DeadLinks](
    [FileID] [int] NOT NULL,
    [ReportedBy] [nvarchar](256) NOT NULL,
CONSTRAINT [PK_DeadLinks] PRIMARY KEY([FileID],[ReportedBy]),
CONSTRAINT [FK_DeadLinks_FilesIn] FOREIGN KEY([FileID])
REFERENCES [FilesIn] ([FileID])
ON UPDATE CASCADE ON DELETE CASCADE,
CONSTRAINT [FK_DeadLinks_KBSEC_Users] FOREIGN KEY([ReportedBy])
REFERENCES [KBSEC_Users] ([UserName]))

Rating

CREATE TABLE [Rating](
    [FileID] [int] NOT NULL,
    [RatedBy] [nvarchar](256) NOT NULL,
    [Score] [tinyint] NOT NULL,
CONSTRAINT [PK_Rating] PRIMARY KEY([FileID],[RatedBy]),
CONSTRAINT [FK_Rating_FilesIn] FOREIGN KEY([FileID])
REFERENCES [FilesIn] ([FileID])
ON UPDATE CASCADE
ON DELETE CASCADE,
CONSTRAINT [FK_Rating_KBSEC_Users] FOREIGN KEY([RatedBy])
REFERENCES [KBSEC_Users] ([UserName]))
10.1.2 Stored Procedures

AgeInterval

CREATE PROCEDURE [AgeInterval]
(
    @Type CHAR(2)=NULL,
    @From DATETIME,
    @To DATETIME,
    @Categ CHAR(1)=NULL
)
AS
IF @Type IS NOT NULL AND @Categ IS NULL
BEGIN
SELECT COUNT(HIS_Number) AS 'NumPatient',
    case
        when PersonsAge(DOB,GETDATE()) BETWEEN 0 AND 5 then '0-5'
        when PersonsAge(DOB,GETDATE()) BETWEEN 6 AND 15 then '06-15'
        when PersonsAge(DOB,GETDATE()) BETWEEN 16 AND 20 then '16-20'
        when PersonsAge(DOB,GETDATE()) BETWEEN 21 AND 30 then '21-30'
        when PersonsAge(DOB,GETDATE()) BETWEEN 31 AND 40 then '31-40'
        when PersonsAge(DOB,GETDATE()) BETWEEN 41 AND 50 then '41-50'
        when PersonsAge(DOB,GETDATE()) BETWEEN 51 AND 60 then '51-60'
        when PersonsAge(DOB,GETDATE()) BETWEEN 61 AND 70 then '61-70'
        when PersonsAge(DOB,GETDATE()) >= 70 then '70 ABOVE'
END AS 'Age'
FROM Demographic WHERE CancerType LIKE +'%'+'@Type AND
DORRI BETWEEN @From AND @To
GROUP BY

case
when PersonsAge(DOB, GETDATE()) BETWEEN 0 AND 5 then '0-5'
when PersonsAge(DOB, GETDATE()) BETWEEN 6 AND 15 then '06-15'
when PersonsAge(DOB, GETDATE()) BETWEEN 16 AND 20 then '16-20'
when PersonsAge(DOB, GETDATE()) BETWEEN 21 AND 30 then '21-30'
when PersonsAge(DOB, GETDATE()) BETWEEN 31 AND 40 then '31-40'
when PersonsAge(DOB, GETDATE()) BETWEEN 41 AND 50 then '41-50'
when PersonsAge(DOB, GETDATE()) BETWEEN 51 AND 60 then '51-60'
when PersonsAge(DOB, GETDATE()) BETWEEN 61 AND 70 then '61-70'
when PersonsAge(DOB, GETDATE()) >= 70 then '70 ABOVE'

END

END

ELSE IF @Type IS NOT NULL AND @Categ IS NOT NULL

BEGIN

SELECT COUNT(HIS_Number) AS 'NumPatient',
case
when PersonsAge(DOB, GETDATE()) BETWEEN 0 AND 14 then '0-14'
when PersonsAge(DOB, GETDATE()) BETWEEN 15 AND 34 then '15-34'
when PersonsAge(DOB, GETDATE()) BETWEEN 35 AND 64 then '35-64'
when PersonsAge(DOB, GETDATE()) >= 65 then '65 ABOVE'

END AS 'Age'

FROM Demographic WHERE CancerType LIKE +'%'+@Type AND
DORRI BETWEEN @From AND @To

GROUP BY

case
when PersonsAge(DOB, GETDATE()) BETWEEN 0 AND 14 then '0-14'
when PersonsAge(DOB,GETDATE()) BETWEEN 15 AND 34 then '15-34'
when PersonsAge(DOB,GETDATE()) BETWEEN 35 AND 64 then '35-64'
when PersonsAge(DOB,GETDATE()) >= 65 then '65 ABOVE'
END

10.1.3 Triggers

trig_DeletedFilesIn

CREATE TRIGGER [trig_DeletedFilesIn] ON [FilesIn] FOR DELETE AS
INSERT INTO DeletedFilesIn(Url,Title,Description,CrawledDate,
[Size],Mime,Extension,DateDeleted)
SELECT Url,Title,Description,CrawledDate,[Size],Mime,
Extension,GetDate()
from DELETED

trig_DeletedNotes

CREATE TRIGGER [trig_DeletedNotes] ON [Notes] FOR DELETE AS
INSERT INTO DeletedNotes(WrittenBy,DateWritten,Title,
Description,[Content],DateDeleted)
SELECT WrittenBy,DateWritten,Title,Description,[Content],GetDate()
from DELETED