**Question 1**

USE [MyDB]

GO

CREATE TABLE [dbo].[Restaurant](

[Res\_Code] [int] NOT NULL,

[Res\_Name] [varchar](30) NOT NULL,

[Res\_Status] [char](1) NOT NULL,

CONSTRAINT [PK\_Restaurant\_Res\_Code] PRIMARY KEY CLUSTERED

(

[Res\_Code] ASC

)WITH (PAD\_INDEX = OFF, STATISTICS\_NORECOMPUTE = OFF, IGNORE\_DUP\_KEY = OFF, ALLOW\_ROW\_LOCKS = ON, ALLOW\_PAGE\_LOCKS = ON) ON [PRIMARY]

) ON [PRIMARY]

GO

ALTER TABLE [dbo].[Restaurant] WITH CHECK ADD CONSTRAINT [ck\_Res\_Status\_Y\_N] CHECK (([Res\_Status]='Y' OR [Res\_Status]='N'))

GO

ALTER TABLE [dbo].[Restaurant] CHECK CONSTRAINT [ck\_Res\_Status\_Y\_N]

GO

EXEC sys.sp\_addextendedproperty @name=N'MS\_Description', @value=N'Restaurant Code' , @level0type=N'SCHEMA',@level0name=N'dbo', @level1type=N'TABLE',@level1name=N'Restaurant', @level2type=N'COLUMN',@level2name=N'Res\_Code'

GO

EXEC sys.sp\_addextendedproperty @name=N'MS\_Description', @value=N'Restaurant Name' , @level0type=N'SCHEMA',@level0name=N'dbo', @level1type=N'TABLE',@level1name=N'Restaurant', @level2type=N'COLUMN',@level2name=N'Res\_Name'

GO

EXEC sys.sp\_addextendedproperty @name=N'MS\_Description', @value=N'Restaurant Status--''Y'' if in business, ''N'' if closed down.' , @level0type=N'SCHEMA',@level0name=N'dbo', @level1type=N'TABLE',@level1name=N'Restaurant', @level2type=N'COLUMN',@level2name=N'Res\_Status'

GO

USE [MyDB]

GO

CREATE TABLE [dbo].[Bookings](

[Bok\_Code] [int] NOT NULL,

[Res\_Code] [int] NOT NULL,

[Bok\_Status] [char](1) NOT NULL,

CONSTRAINT [PK\_Bookings\_Bok\_Code] PRIMARY KEY CLUSTERED

(

[Bok\_Code] ASC

)WITH (PAD\_INDEX = OFF, STATISTICS\_NORECOMPUTE = OFF, IGNORE\_DUP\_KEY = OFF, ALLOW\_ROW\_LOCKS = ON, ALLOW\_PAGE\_LOCKS = ON) ON [PRIMARY]

) ON [PRIMARY]

GO

ALTER TABLE [dbo].[Bookings] WITH CHECK ADD FOREIGN KEY([Bok\_Code])

REFERENCES [dbo].[Restaurant] ([Res\_Code])

GO

ALTER TABLE [dbo].[Bookings] WITH CHECK ADD CONSTRAINT [ck\_Bok\_Status\_F\_P\_C] CHECK (([Bok\_Status]='F' OR [Bok\_Status]='P' OR [Bok\_Status]='C'))

GO

ALTER TABLE [dbo].[Bookings] CHECK CONSTRAINT [ck\_Bok\_Status\_F\_P\_C]

GO

EXEC sys.sp\_addextendedproperty @name=N'MS\_Description', @value=N'Booking Code' , @level0type=N'SCHEMA',@level0name=N'dbo', @level1type=N'TABLE',@level1name=N'Bookings', @level2type=N'COLUMN',@level2name=N'Bok\_Code'

GO

EXEC sys.sp\_addextendedproperty @name=N'MS\_Description', @value=N'Restaurant Code' , @level0type=N'SCHEMA',@level0name=N'dbo', @level1type=N'TABLE',@level1name=N'Bookings', @level2type=N'COLUMN',@level2name=N'Res\_Code'

GO

EXEC sys.sp\_addextendedproperty @name=N'MS\_Description', @value=N'Booking Status--''F'' for future bookings, ''P'' for bookings where the date has passed, ''C'' for cancelled bookings.' , @level0type=N'SCHEMA',@level0name=N'dbo', @level1type=N'TABLE',@level1name=N'Bookings', @level2type=N'COLUMN',@level2name=N'Bok\_Status'

GO

***Please write the SQL which will retrieve the code and name of all in-business restaurants which do not have any future bookings.***

***ANS:***

USE MyDB

GO

SELECT res.[Res\_Code]

,res.[Res\_Name]

,res.Res\_Status

FROM [MyDB].[dbo].[Restaurant] res

JOIN [dbo].[Bookings] bok ON bok.Bok\_Code = res.Res\_Code

WHERE res.[Res\_Status] = 'Y'

AND bok.[Bok\_Status] NOT IN ('P','C')

GO

**Question 2**

USE [MyDB]

GO

CREATE TABLE [dbo].[TV](

[TV\_Channel] VARCHAR(15) NOT NULL,

[TV\_Content] VARCHAR(30) NOT NULL,

[TV\_Perc] DECIMAL(5,2) NOT NULL

) ON [PRIMARY]

GO

EXEC sys.sp\_addextendedproperty @name=N'MS\_Description', @value=N'Channel Code' , @level0type=N'SCHEMA',@level0name=N'dbo', @level1type=N'TABLE',@level1name=N'TV', @level2type=N'COLUMN',@level2name=N'TV\_Channel'

GO

EXEC sys.sp\_addextendedproperty @name=N'MS\_Description', @value=N'Content Code' , @level0type=N'SCHEMA',@level0name=N'dbo', @level1type=N'TABLE',@level1name=N'TV', @level2type=N'COLUMN',@level2name=N'TV\_Content'

GO

EXEC sys.sp\_addextendedproperty @name=N'MS\_Description', @value=N'Percentage--The percentage of channel the content makes up.' , @level0type=N'SCHEMA',@level0name=N'dbo', @level1type=N'TABLE',@level1name=N'TV', @level2type=N'COLUMN',@level2name=N'TV\_Perc'

GO

***ANS:***

USE [MyDB]

GO

SELECT TV\_Channel, SUM(TV\_Perc)

FROM dbo.TV

GROUP BY TV\_Channel

HAVING SUM(TV\_Perc) <=100

GO

USE [MyDB]

GO

SELECT TV\_Channel, 100 - SUM(TV\_Perc)

FROM dbo.TV

GROUP BY TV\_Channel

GO

**Question 3**

USE [MyDB]

GO

CREATE TABLE [dbo].[Customer](

[Cus\_Code] [int] NOT NULL,

[Cus\_Surn] VARCHAR(30) NOT NULL,

[Cus\_Fnm] VARCHAR(30) NOT NULL,

PRIMARY KEY CLUSTERED

(

[Cus\_Code] ASC

)WITH (PAD\_INDEX = OFF, STATISTICS\_NORECOMPUTE = OFF, IGNORE\_DUP\_KEY = OFF, ALLOW\_ROW\_LOCKS = ON, ALLOW\_PAGE\_LOCKS = ON) ON [PRIMARY]

) ON [PRIMARY]

GO

EXEC sys.sp\_addextendedproperty @name=N'MS\_Description', @value=N'Customer Code' , @level0type=N'SCHEMA',@level0name=N'dbo', @level1type=N'TABLE',@level1name=N'Customer', @level2type=N'COLUMN',@level2name=N'Cus\_Code'

GO

EXEC sys.sp\_addextendedproperty @name=N'MS\_Description', @value=N'Customer Surname' , @level0type=N'SCHEMA',@level0name=N'dbo', @level1type=N'TABLE',@level1name=N'Customer', @level2type=N'COLUMN',@level2name=N'Cus\_Surn'

GO

EXEC sys.sp\_addextendedproperty @name=N'MS\_Description', @value=N'Customer Forename' , @level0type=N'SCHEMA',@level0name=N'dbo', @level1type=N'TABLE',@level1name=N'Customer', @level2type=N'COLUMN',@level2name=N'Cus\_Fnm'

GO

SELECT Cus\_Code

, Cus\_Surn

FROM CUSTOMER

WHERE CUS\_SURN NOT LIKE 'A%'

OR CUS\_SURN NOT LIKE 'B%'

***ANS:***

*The query returns all the codes of all customers because it is using the OR clause as OR checks if one of the two predicates is TRUE, that is why the code is not doing what we are querying.*

**Question 4**

***What record(s) would get deleted from the tasks table if you ran the following code?***

DELETE FROM TASKS

SELECT TASKID

, APPLICATIONID

, TASKNAME

FROM TASKS

WHERE TASKID = 1

***ANS:***

*The delete script deletes* ***all the data in the TASKS table*** *and the select statement does not return anything. If we have used the WHERE clause in the delete, it would have deleted only the data with the TASKID = 1.*

**Question 5**

***What command would you run to check for blocking on your sql server?***

***ANS:***

There are number of ways to check for blocking on the SQL Server and some of these are the following:

*sys.dm\_exec\_requests DMV*

USE Master

GO

SELECT \*

FROM sys.dm\_exec\_requests

WHERE blocking\_session\_id <> 0;

GO

*Sys.dm\_os\_waiting\_tasks*

USE Master

GO

SELECT session\_id, wait\_duration\_ms, wait\_type, blocking\_session\_id

FROM sys.dm\_os\_waiting\_tasks

WHERE blocking\_session\_id <> 0

GO

*sp\_who2, which is a system stored procedure*

USE Master

GO

EXEC sp\_who2

GO