

Name: Jin Lin

Course: Data Mgt and Database Design

Course ID: INFO6210 18650 SEC 05

Instructor: Yusuf Ozbek

Date/Time Query

```
1 select
2     adddate('2017-10-18', interval 13 day) 'adddate',
3     addtime('2017-10-18 23:59:59.999999', '0 1:1:1.000002') 'addtime',
4     convert_tz('2017-10-18 08:00:00', '+01:00', '+08:00') 'convert_tz',
5     curdate(),current_date,current_date(),
6     curtime(),current_time,current_time()
7
```

	adddate	addtime	convert_tz	curdate()	current_date	current_date()	curtime()	current_time	current_time()
	2017-10-31	2017-10-19 01:01:01.000001	2017-10-18 15:00:00	2017-10-18	2017-10-18	2017-10-18	20:38:36	20:38:36	20:38:36

```
9 select
10     current_timestamp,current_timestamp(),
11     date('2017-10-18 08:00:00') 'date',
12     datediff('2017-10-18','2007-10-18') 'datediff',
13     DATE_ADD('2017-10-18 08:00:00',INTERVAL 12 day) 'date_add'
14 ;
15
```

	current_timestamp	current_timestamp()	date	datediff	date_add
	2017-10-18 20:42:58	2017-10-18 20:42:58	2017-10-18	3653	2017-10-30 08:00:00

```
16 SELECT
17     DATE_FORMAT('1997-10-04 22:23:00','%H %k %I %r %T %S %w') 'date_format',
18     DATE_sub('2017-10-18 08:00:00',INTERVAL 12 day) 'date_sub',
19     day('2017-10-18 08:00:00') 'day',
20     dayname('2017-10-18 08:00:00') 'dayname',
21     dayofmonth('2017-10-18 08:00:00') 'dayofmonth'
22 ;
```

	date_format	date_sub	day	dayname	dayofmonth
	22 22 10 10:23:00 PM 22:23:00 00 6	2017-10-06 08:00:00	18	Wednesdav	18

```
24 select
25     dayofweek('2017-10-18') 'dayofweek',
26     dayofyear('2017-10-18') 'dayofyear',
27     extract(day_second from '2017-10-18 08:00:01') 'extract',
28     from_days(123123) 'from_days',
29     FROM_UNIXTIME(1447430881) 'from_unixtime';
30
```

	dayofweek	dayofyear	extract	from_days	from_unixtime
	4	291	18080001	0337-02-06	2015-11-13 11:08:01

```

31 • select
32     get_format(date,'ISO') 'get_format',
33     hour('08:09:10') 'hour',
34     last_day('2016-02-18') 'last_day',
35     localtime(),localtimestamp()
36 ;

```

	get_format	hour	last_day	localtime()	localtimestamp()
	%Y-%m-%d	8	2016-02-29	2017-10-18 21:30:49	2017-10-18 21:30:49

```

37 • select
38     makedate(2017,128) 'makedate',
39     maketime(3,4,5) 'maketime',
40     microsecond('12:00:00.541223') 'microsecond',
41     minute('12:04:00') 'minute',
42     month('2017-10-18 08:00:01') 'month',monthname('2017-10-18 08:00:01') 'monthname';

```

	makedate	maketime	microsecond	minute	month	monthname
	2017-05-08	03:04:05	541223	4	10	October

```

43 • select
44     now(),
45     period_add(1702,100) 'period_add',
46     period_diff(1203,1708) 'period_diff',
47     quarter('2017-06-30') 'quarter',
48     SECOND('10:05:03') 'second',
49     sec_to_time(7199) 'sec_to_time';

```

	now()	period_add	period_diff	quarter	second	sec_to_time
	2017-10-18 21:39:37	202506	-65	2	3	01:59:59

```

50 • select
51     str_to_date('May 1, 2013','%M %d,%Y') 'str_to_date',
52     subdate('2017-10-18',interval 20 day) 'subdate',
53     subtime('2017-10-18 08:00:00','123 03:05:20') 'subtime',
54     sysdate(),
55     time('2017-10-18 08:00:00') 'time';
56

```

	str_to_date	subdate	subtime	sysdate()	time
	2013-05-01	2017-09-28	2017-09-13 09:00:01	2017-10-18 21:44:04	08:00:00

```

57 • select
58     timediff('2017-10-18 08:00:00','2017-10-18 08:00:00.00001') 'timediff',
59     timestamp('2017-10-18 08:00:00','18:32:26') 'timestamp',
60     timestampadd(week,1,'2017-10-18') 'timestampadd',
61     timestampdiff(second,'2017-10-18 08:00:00','2017-10-18 07:00:00') 'timestampdiff',
62     time_format('23:45:56','%H %k %h %I %l') 'time_format';
63

```

	timediff	timestamp	timestampadd	timestampdiff	time_format
	-00:00:00.00001	2017-10-19 02:32:26	2017-10-25	-3600	23 23 11 11 11

```

64 • SELECT
65     time_to_sec('32:23:00') 'time_to_sec',
66     to_days(20171018) 'to_days',
67     to_seconds(20171018) 'to_seconds',
68     unix_timestamp() 'unix_timestamp',
69     utc_date(),utc_time(),utc_timestamp()
70 ;

```

	time_to_sec	to_days	to_seconds	unix_timestamp	utc_date()	utc_time()	utc_timestamp()
	116580	736985	63675504000	1508378198	2017-10-19	01:56:38	2017-10-19 01:56:38

```

72 select
73     week('2017-12-31',1) 'week',
74     weekday('2017-10-18') 'weekday',
75     weekofyear('2017-10-18') 'weekofyear',
76     year('2017-10-18 08:00:00') 'year',
77     yearweek('2018-01-01') 'yearweek';

```

week	weekday	weekofyear	year	yearweek
52	2	42	2017	201753

Beginning SQL

Chapter 5

Exercise 1

```

1 select
2     concat(FirstName, ' ', LastName) 'Name',
3     coalesce(Street, 'No address detail available for this member') 'Street',
4     coalesce(ZipCode, 'No zipcode detail available for this memeber') 'Zipcode'
5 from memberdetails;

```

Name	Street	Zipcode
Katie Smith	Main Road	123456
Bob Robson	Little Street	34565
Sandra Jakes	The Avenue	65423
Steve Gee	45 Upper Road	99112
John Jones	New Lane	88776
Jennv Jones	New Lane	88776

Beginning MySQL

Chapter 6

Exercise 1

```

1 Create Table Books
2 (
3     BookID smallint not null primary key,
4     BookName varchar(50) not null
5 );
6
7 Insert Books
8 values (1001, 'One Hundred Years of Solitude');
9
10 select * from Books;
11

```

BookID	BookName
1001	One Hundred Years of Solitude
NULL	NULL

Exercise 2

```

6
7 Insert Books
8 values (1001, 'One Hundred Years of Solitude');
9
10 Delete from books where BookId = 1001;
11
12 replace books
13 set BookID = 1001, BookName = 'One Hundred Years of Solitude';
14
15 select * from Books;

```

BookID	BookName
1001	One Hundred Years of Solitude
NULL	NULL

Exercise 3

```

13 • Update Cds
14   set cdQuantity = CDQuantity + 3
15   where cdid>=0;
16
17 • select * from cds;|

```

CDID	CDName	CDQuantity
1	Mule Variations	13
2	Short Sharp Shocked	6
3	The Bonnie Raitt Collection	10
NULL	NULL	NULL

Exercise 4

```

17 • UPDATE CDs
18   SET CDQuantity=CDQuantity+3
19   WHERE CDName='Mule Variations' and cdid>=0;
20
21 • select * from cds;|

```

CDID	CDName	CDQuantity
1	Mule Variations	16
2	Short Sharp Shocked	6
3	The Bonnie Raitt Collection	10
NULL	NULL	NULL

Exercise 5

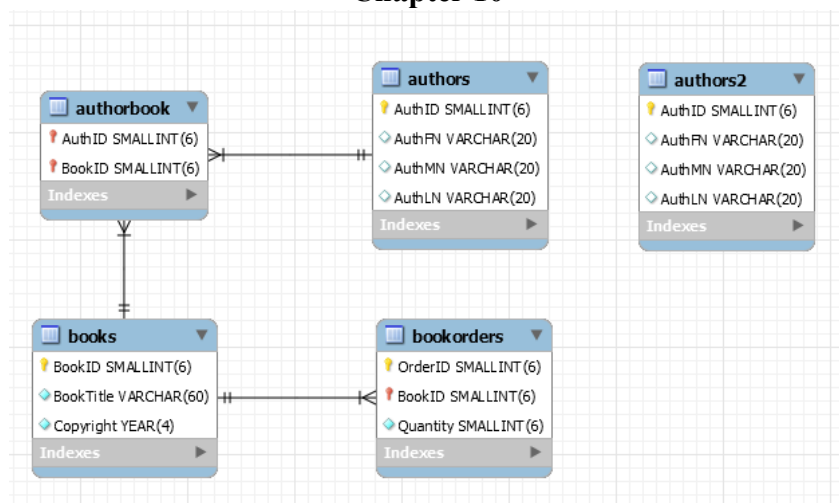
```

21 • delete from cds
22   where cdid = 1;
23
24 • select * from cds;|

```

CDID	CDName	CDQuantity
2	Short Sharp Shocked	6
3	The Bonnie Raitt Collection	10
NULL	NULL	NULL

Chapter 10



Exercise 1

```

1 • select
2     books.BookTitle as 'Book Name',
3     group_concat(concat(authors.AuthFN, ' ', authors.AuthLN)) as 'Author Name'
4 from books, authors, authorbook
5 where books.BookID = authorbook.BookID and
6        authors.AuthID = authorbook.AuthID
7 group by BookTitle
8 order by books.BookTitle asc;
9

```

Book Name	Author Name
A Confederacy of Dunces	John Toole
Black Elk Speaks	Black Elk, John Neihardt
Hell's Angels	Hunter Thompson
Letters to a Young Poet	Rainer Rilke
Nonconformity	Nelson Algren
Postcards	Annie Proulx
The Shipping News	Annie Proulx

Exercise 2

```

1 • select
2     books.BookTitle as 'Book Name',
3     group_concat(concat(authors.AuthFN, ' ', authors.AuthLN)) as 'Author Name'
4 from books
5 cross join authorbook
6 on books.BookID = authorbook.BookID
7 cross join authors
8 on authorbook.AuthID = authors.AuthID
9 where authors.AuthLN like 'Toole%' or authors.AuthLN like 'Thompson%'
10 group by books.BookTitle;
11

```

Book Name	Author Name
A Confederacy of Dunces	John Toole
Hell's Angels	Hunter Thompson

Exercise 3

```

1 • select
2     books.BookTitle as 'Book Name',
3     group_concat(concat(authors.AuthFN, ' ', authors.AuthLN)) as 'Author Name'
4 from books
5 right join authorbook
6 on books.BookID = authorbook.BookID
7 right join authors
8 on authorbook.AuthID = authors.AuthID
9 group by books.BookTitle asc;
10

```

Book Name	Author Name
NULL	Joyce Kilmer, Alan Watts
A Confederacy of Dunces	John Toole
Black Elk Speaks	Black Elk, John Neihardt
Hell's Angels	Hunter Thompson
Letters to a Young Poet	Rainer Rilke
Nonconformity	Nelson Algren
Postcards	Annie Proulx
The Shipping News	Annie Proulx

Exercise 4

```

11 • select
12     books.BookTitle as 'Book Name',
13     group_concat(concat(authors.AuthFN, ' ', authors.AuthLN)) as 'Author Name'
14 from books natural right join authorbook natural right join authors
15 group by books.BookTitle asc;

```

Book Name	Author Name
NULL	Joyce Oates, Alan Watts
A Confederacy of Dunces	John Toole
Black Elk Soeaks	Black Elk, John Neihardt
Hell's Angels	Hunter Thompson
Letters to a Young Poet	Rainer Rilke
Nonconformity	Nelson Algren
Postcards	Annie Proulx
The Shipping News	Annie Proulx

Exercise 5

```

1 • select books.BookTitle
2 from books
3 where books.bookid in
4     (select bookorders.BookID from bookorders where bookorders.Quantity > 2)
5 order by books.BookTitle;

```

BookTitle
Black Elk Soeaks
Letters to a Young Poet
Nonconformity

Exercise 6

```

1 • SELECT OrderID, BookID, Quantity
2 FROM BookOrders
3 WHERE BookID =
4     (SELECT BookID FROM Books WHERE BookTitle = 'Letters to a Young Poet');

```

OrderID	BookID	Quantity
101	12786	1
103	12786	2
107	12786	3
110	12786	2
NULL	NULL	NULL

Exercise 7

```

1 • select authors.AuthLN from authors
2 union
3 select authors2.AuthLN from authors2
4 order by AuthLN;

```

AuthLN
Algren
Camus
Carver
Elk
Forster
Marquez
Neihardt
Oates
Proulx
Rilke
Shelley
Thompson
Toole
Twain
Watts

Beginning Database Design

Chapter 9

Exercise 1

Considering that customer to order is one-to-many relationship as well as that product to order

is one-to-many relationship, the order table should have foreign key referenced the table customer and the table product.

The order table should be created as following:

```
CREATE TABLE Order
(
  order_num INT PRIMARY KEY,
  product INT NOT NULL FOREIGN KEY REFERENCES Product,
  customer INT NOT NULL FOREIGN KEY REFERENCES Customer,
  quantity INT NOT NULL, date DATE NOT NULL);
```

Exercise 2

This module should have make table, model table, type table.

Make table:

```
create table make
(
  makeName varchar(50) not null primary key
);
```

Model table:

```
create table model
(
  modelName varchar(50) not null,
  makeName varchar(50) not null foreign key references make
);
```

Type table:

```
create table Version
(
  versionID smallint not null auto_increment primary key,
  typeName varchar(50) not null,
  capacity varchar(50) not null,
  transmission varchar(20) not null,
  price int not null,
  modelName varchar(50) not null,
  makeName varchar(50) not null,
  foreign key (modelName) references model,
  foreign key (makeName) references model
);
```