----------------------------------------------建库-----------------------------------------------

--1.新建数据库dbstudy100

create database dbstudy100

on primary

(name='dbstudy100',

filename='c:\database\dbstudy100.mdf',--

size=10mb,

filegrowth=10mb

)

log on

(name='dbstudy100.log',

filename='c:\database\dbstudy100\_log.ldf',

size=5mb,

filegrowth=10%

)

--------------------------------------------建表----------------------------------------------

--2.建班级表（班号，班名）-------需要在学生信息表建立之前建立，因为学生信息表中的班号必须与班级表的班号对应

use dbstudy100

create table classinfo

(cid int not null primary key identity(1,1),

cname nvarchar(10)

)

--3.建学生信息表（学号，姓名，性别，年龄，系名，班号）-----学号为主键---班号为外键

use dbstudy100

create table studentinfo

(stid int not null primary key identity(1,1),

sname nvarchar(10),

sgender bit,

sage int,

sdept nvarchar(10),

cid int ,

foreign key(cid) references classinfo (cid)

)

--4.建课程表（课号，课名,先修课号，学分）---------先修课号为外键

use dbstudy100

create table subjectinfo

(subid int not null primary key identity(1,1),

subname nvarchar(10),

pnoid int,

subcredit int ,

foreign key(pnoid ) references subjectinfo(subid)

)

--5.建选课表（学号，课程号，分数）---------学号+课程号为主键，学号为外键，课程号为外键

use dbstudy100

create table sc

(stid int ,

subid int,

grade decimal(4,1),

primary key(stid,subid),------学号+课程号为主键

foreign key( stid) references studentinfo(stid),-----学号为外键

foreign key(subid ) references subjectinfo(subid)-----课程号为外键

)

------------------------------------------填加数据--------------------------------------------

--6.向班级表中添加数据

use dbstudy100

insert into classinfo

values ('jike'),('wangluo'),('shumei')

insert into classinfo

values ('jike1'),('wangluo1'),('shumei1')

insert into classinfo

values ('jike2'),('wangluo2'),('shumei2')

select \* from classinfo

--7.向学生信息表中添加数据

use dbstudy100

insert into studentinfo

values

('黄磊',1,23,'cs',2),

('姚明',0,24,'cs',1 ),

('李冰冰',1,23,'cs',2),

('刘诗诗',0,24,'cs',1 ),

('鹿晗',1,23,'cs',2),

('肖战',0,24,'cs',1 ),

('周笔畅',1,23,'cs',2),

('王俊凯',0,24,'cs',1 ),

('赵丽颖',1,23,'cs',2),

('唐嫣',0,24,'cs',1 )

insert into studentinfo

values (null,1,23,'cs',2)

--8.向课程表中添加数据

insert into subjectinfo

values

('c语言',1,3),

('数据结构',3,3 ),

('线性代数',2,4),

('大学物理',1,1),

('c++程序设计',4,2),

('英语1',2,4 ),

('英语2',1,5),

('数据库系统',3,3 ),

('高等数学',1,5),

('网络',3,24 )

select \* from subjectinfo

--9.向选课表中添加数据

insert into sc

values

(2,3,90),(2,4,98),(3,4,80),(2,5,90),(2,9,98),(8,9,80),(8,2,70),(9,6,98),(6,4,80),(7,5,90),(6,5,98),(3,9,80),(4,6,70)

select \* from sc

-----------------------------------修改表结构------------------------------

--10.为学生表添加属性电话号码-------修改表结构,添加字段

alter table studentinfo

add telphone varchar(11)

--11.为学生表添加属性邮箱-------修改表结构,添加字段

alter table studentinfo

add semail varchar(50)

--12.给电话号码赋值-------更新数据,给电话号码赋值

update studentinfo

set telphone='14112345678' where stid=7

update studentinfo

set telphone='15112345678' where stid=8

update studentinfo

set telphone='16112345678' where stid=9

update studentinfo

set telphone='17112345678' where stid=10

update studentinfo

set telphone='19112345678' where stid=11

update studentinfo

set telphone='16112345678' where stid=12

update studentinfo

set telphone='13112345678' where stid=13

select \* from studentinfo

--13. 给邮箱赋值-------更新数据

update studentinfo

set semail='14112345678@qq.com' where stid=7

update studentinfo

set semail='15112345678@126.com' where stid=8

update studentinfo

set semail='16112345678@126.com' where stid=9

update studentinfo

set semail='17112345678@qq.com' where stid=10

update studentinfo

set semail='19112345678@qqq.com' where stid=11

update studentinfo

set semail='16112345678@163.com' where stid=12

update studentinfo

set semail='13112345678@2qq.com' where stid=13

-----------------------------------------查询表中全部数据----------------------------------------------

use dbstudy100

insert into studentinfo

values

('黄磊1',1,23,'cs',null,null,null )

select \* from studentinfo

select \* from classinfo

select \* from studentinfo

select \* from studentinfo

select \* from subjectinfo

select \* from sc

----------------------------------------------模糊查询---------------------------------------

--1.查询名字中有冰字的学生

select \* from studentinfo

where sname like '%冰%'-------- % :0到多个字符

--2. 查询名字姓“黄”的学生

select \* from studentinfo

where sname like '黄%'

--3.查询名字为两个字,姓唐的学生

select \* from studentinfo

where sname like '唐\_'-------- \_:一个任意字符

--4.查询姓名为null的学生

select \* from studentinfo

where sname is null----------is null

--5.查询姓名不为空的学生

select \* from studentinfo

where sname is not null----------is not null

--6.查询电话号码为13开头的学生

select \* from studentinfo

where telphone like '14%'

--7.查询电话号码为15,17,19开头的学生

select \* from studentinfo

where telphone like '1[5\_7\_9]%'---------5 或7或9

--8.查询电话号码不是15,17,19开头的学生

select \* from studentinfo

where telphone like '1[^5\_ 7\_ 9]%'--------^:在[]内开头,不使用[]内的任何字符

--9.查询电话号码是以15-19开头的学生

select \* from studentinfo

where telphone like '1[5-9]%'---------5-9: 5,6,7,8,9

--10.查询邮箱是qq邮箱的学生

select \* from studentinfo

where semail like '%@qq.com'

-----------------------------------------查询表中全部数据----------------------------------------------

use dbstudy100

select \* from classinfo

select \* from studentinfo

select \* from studentinfo

select \* from subjectinfo

select \* from sc

------------------------------------连接查询------------------------------------------

----1. 内连接 inner join : a.cid =b.cid----- a 和b中的cid都完全相等

select a.\* ,b.\* from studentinfo as a

inner join classinfo as b on a.cid=b.cid

----2.左连接 left join : a.cid =b.cid-------a中全部的cid都显示，包括cid为null值的

select a.\* ,b.\* from studentinfo as a

left join classinfo as b on a.cid=b.cid

---3. 右连接 right join：a.cid =b.cid------b中全部的cid都显示，包括3-10班的

select a.\* ,b.\* from studentinfo as a

right join classinfo as b on a.cid=b.cid

----4. 完全连接full join：a.cid =b.cid-----a中全部的cid都显示，包括cid为null值的,b中全部的cid都显示，包括3-10班的

select a.\* ,b.\* from studentinfo as a

full join classinfo as b on a.cid=b.cid

--5. 查询学生的姓名和班级名称

select a.sname ,b.cname from studentinfo as a

inner join classinfo as b on a.cid=b.cid

--6. 查询学号,姓名,课程名,分数-------多表连接

----方式1

select b.stid ,b.sname,c.subname,a.grade from sc as a

inner join studentinfo as b on a.stid=b.stid

inner join subjectinfo as c on c.subid=a.subid

---方式2

select a.stid ,a.sname,c.subname,b.grade from studentinfo as a

inner join sc as b on a.stid=b.stid

inner join subjectinfo as c on c.subid=b.subid

--7. 查询学号,姓名,课程名,分数,按照学号升序排列，学号相同时，按照分数降序排列----多表连接+连接后排序

select b.stid ,b.sname,c.subname,a.grade from sc as a

inner join studentinfo as b on a.stid=b.stid

inner join subjectinfo as c on c.subid=a.subid

order by stid asc,grade desc

--8.查询学生学号，姓名，性别，年龄，班名，课名，课程分数-----多表连接

select b.stid ,b.sname,b.sgender,b.sage,d.cname ,c.subname,a.grade from sc as a

inner join studentinfo as b on a.stid=b.stid

inner join subjectinfo as c on c.subid=a.subid

inner join classinfo as d on d.cid=b.cid