

表查询

```
SELECT * FROM student;
SELECT * FROM classes;
SELECT * FROM teacher;
SELECT * FROM course;
SELECT * FROM score;
```

列默认值

```
ALTER TABLE student DROP COLUMN idcard;

-- 方案1
-- 添加列
-- 修改数据
-- 修改列非空

-- 方案2
-- 设置默认值
ALTER TABLE student ADD idcard VARCHAR2(18) DEFAULT 1 NOT NULL;
```

分页查询

```
-- rowid:数据在内存当中的地址标识
-- ROWNUM:查询数据排序编号
-- 查询时不能直接使用*
SELECT student.*,ROWID,ROWNUM FROM student;
SELECT student.*,ROWID FROM student;

-- ROWNUM:先查询再排序,不能group by直接使用
SELECT a.*,ROWNUM FROM (
SELECT s.* FROM student s ORDER BY stuname) a;

SELECT classid,count(*) FROM student s GROUP BY classid;

-- ROWNUM:做查询条件时,必须从第一条数据开始
SELECT student.* FROM student WHERE ROWNUM=1;
SELECT student.* FROM student WHERE ROWNUM=3;
SELECT student.* FROM student WHERE ROWNUM<5;
SELECT student.* FROM student WHERE ROWNUM>0;

-- 分页查询
SELECT *
  FROM (SELECT STUDENT.*, ROWNUM RM FROM STUDENT)
 WHERE RM > 5
    AND RM < 11;
```

类型转换

```
-- 类型转换: CAST(str as type):将str转换成指定的type类型
SELECT CAST('23-1月 17' AS DATE),CAST(123 AS VARCHAR2(10)),CAST('123' AS
NUMBER(3)) FROM dual;
```

group by

```
-- 查询
-- group by:查询列: 分组的列,分组之后的有唯一的一条数据匹配的列
SELECT classid,COUNT(*) nums FROM student GROUP BY classid;

SELECT * FROM (
SELECT classid,COUNT(*) nums FROM student GROUP BY classid) WHERE nums>1;
-- having:对于分组之后的聚合函数,作为查询条件使用时
SELECT classid,COUNT(*) nums FROM student
GROUP BY classid
HAVING COUNT(*)>1;
```

TRUNC

```
-- 计算年纪
SELECT TRUNC(months_between(SYSDATE,DATE'2010-01-22')/12) a,
TRUNC(months_between(SYSDATE,DATE'2010-01-23')/12) b,
TRUNC(months_between(SYSDATE,DATE'2010-01-21')/12) c,
TRUNC(months_between(DATE'2019-01-21',DATE'2010-01-22')/12) d
FROM dual;
```

余数

```
-- 计算年纪,求余数
SELECT 12,ABS(-12) FROM dual;
SELECT MOD(5,2),MOD(4,2) FROM dual;
```

判断

```
/* 查询判断
-- 写法1
case 表达式
  when 结果1 then 操作1
  when 结果1 then 操作2
  ...
  ELSE 操作
end
-- 写法2
case
  when 表达式1 then 操作1
  when 表达式2 then 操作2
  ...
  else 操作
end
*/
SELECT stuno,state,
```

```

CASE state WHEN 1 THEN '在校' WHEN 0 THEN '离校' ELSE '未知' END,
CASE WHEN state=1 THEN '在校' WHEN stuno='S016' THEN '离校' ELSE '未知' END
FROM student WHERE stuno ='S001' OR stuno='S016' ;

-- 通过身份证计算年纪和性别
SELECT s.*,
TRUNC(months_between(sysdate,to_date(SUBSTR(idcard,7,8),'yyyy-mm-dd'))/12) age,
CASE MOD(SUBSTR(idcard,17,1),2) WHEN 1 THEN '男' ELSE '女' END sex
FROM student s;

```

行转列

```

-- 行转列
/*
1.case when then
2.decode
3.PIVOT
*/
SELECT c.*,
CASE cid WHEN 1 THEN 0 END 一期,
CASE cid WHEN 2 THEN 0 END 二期,
CASE cid WHEN 3 THEN 0 END 三期
FROM course c;

SELECT S.STUNO,
MAX(CASE CID WHEN 1 THEN SCORE END) 一期,
SUM(CASE CID WHEN 2 THEN SCORE END) 二期,
SUM(CASE CID WHEN 3 THEN SCORE END) 三期
FROM SCORE S
WHERE S.STUNO = 'S006'
GROUP BY S.STUNO;

-- DECODE(str,pat1,rs1,pat2,rs2,pat3,rs3...)
-- 依次判断str是否等于pat1,pat2...相等取对应的rs1,rs2...,都不想等输出空值
SELECT DECODE(1,1,'a') FROM dual;
SELECT DECODE(2,1,'a',2,'b',3,'c') FROM dual;

SELECT S.STUNO,
MAX(DECODE(cid,1,score)) 一期,
SUM(DECODE(cid,2,score)) 二期,
SUM(DECODE(cid,3,score)) 三期
FROM SCORE S
WHERE S.STUNO = 'S006'
GROUP BY S.STUNO;

-- PIVOT
WITH t AS
(SELECT stuno,cid,score FROM score WHERE stuno='S006')
SELECT * FROM t;

WITH t AS
(SELECT stuno,cid,score FROM score)
SELECT * FROM t PIVOT(MAX(score) FOR cid IN (1,2,3,4)) ORDER BY stuno;

SELECT * FROM score;

```

with t as

```
-- with t as(select语句)
WITH t AS
(SELECT * FROM score WHERE stuno='S006'),
s AS
(SELECT stuno,stuname FROM student)
SELECT * FROM s;
```

排名

```
-- 排名
-- S001, 一期排名
WITH t AS(
    SELECT stuno,MAX(score) score FROM score WHERE cid=1 GROUP BY stuno ORDER BY
    stuno
)
SELECT COUNT(stuno)+1 FROM t WHERE score>89;
```

断号排序

```
-- 内层查询可以引用外层查询
-- 断号排序
WITH t AS(
    SELECT stuno,MAX(score) score FROM score WHERE cid=1 GROUP BY stuno ORDER BY
    stuno
)
SELECT t1.*, (SELECT COUNT(*)+1 FROM t t2 WHERE t2.score>t1.score) 名次
FROM t t1
ORDER BY 名次;
```

顺序排序

```
-- 顺序排序
WITH t AS(
    SELECT stuno,MAX(score) score FROM score WHERE cid=1 GROUP BY stuno ORDER BY
    stuno
)
SELECT t1.*, (SELECT COUNT(DISTINCT(score))+1 FROM t t2 WHERE t2.score>t1.score)
名次
FROM t t1
ORDER BY 名次;
```

