1. 写一个批处理，打印3遍消息“This is a test message”

- `lab05_1.sql`

```
\! echo 'This is test message';
\! echo 'This is test message';
\! echo 'This is test message';
```

```
▶ mysql -u root -p < lab05_1.sql
Enter password:
This is test message
This is test message
This is test message
```

2. 建一个表Grade(Sno, value)，用循环结构插入100条记录，其中Sno是递增的奇自然数，value是0到100间的随机**整数**（rand函数）

```
create database lab05;

use lab05

create table Grade (
    Sno int primary key,
    value int
);

delimiter //

create procedure insertGrade ()
  begin
    declare sno int default 1;
    declare val int;
    declare cnt int default 0;
    while cnt < 100 do
      set val = floor(0 + rand() * (101 - 0));
      insert into Grade values (sno, val);
      set sno = sno + 2;
      set cnt = cnt + 1;
    end while;
  end;//

delimiter ;

call insertGrade();
```

3. 写一个查询，展示学生的学号（Sno）和成绩状况。（成绩状况：对于Grade表中value大于80的行显示为'good'，60到80之间的显示'pass'，否则显示'not good'）

```
delimiter //

create function filterValue (val int)
  returns char(10) deterministic
  if val > 80 then return 'good';
    elseif val > 60 then return 'pass';
    else return 'not good';
  end if;//

delimiter ;

select Sno, filterValue(value) as grade from Grade;
```

4. 用模拟的方法算PI的值，采样值取5000即可

（提示：计算落入四分之一圆形区域的点数的占比）

```
delimiter //

create function estimatePI (n int)
  returns double no sql
  begin
    declare x double;
    declare y double;
    declare cnt int default 0;
    declare inNum int default 0;
    declare PI double;
    while cnt < n do
      set x = rand();
      set y = rand();
      if x * x + y * y <= 1 then set inNum = inNum + 1;
      end if;
      set cnt = cnt + 1;
    end while;
    set PI = inNum / n * 4;
    return PI;
  end;//

delimiter ;

select estimatePI(5000);
```

```
+------------------+
| estimatePI(5000) |
+------------------+
|           3.1312 |
+------------------+
1 row in set (0.02 sec)
```