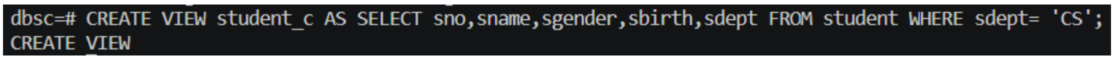
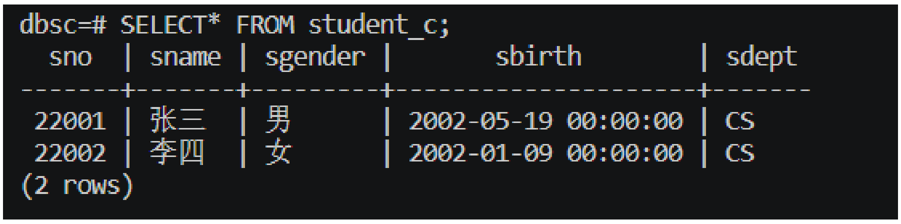
实验三：高级数据管理

学号 3022005055 姓名 李燚坡

【查询 1】

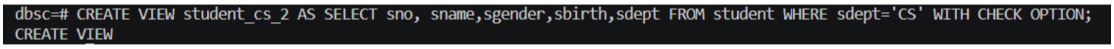


```
dbsc=# CREATE VIEW student_c AS SELECT sno,sname,sgender,sbirth,sdept FROM student WHERE sdept= 'CS';
CREATE VIEW
```



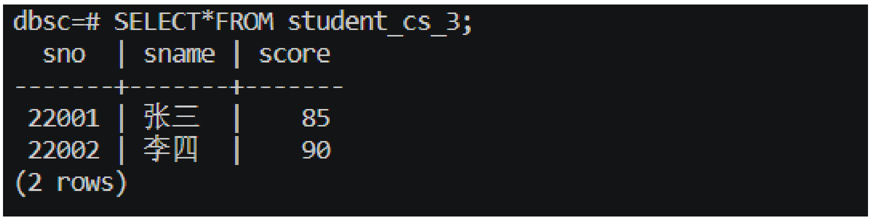
```
dbsc=# SELECT* FROM student_c;
  sno   | sname | sgender |        sbirth         | sdept
-------+-------+---------+---------------------+-------
 22001 | 张三  | 男      | 2002-05-19 00:00:00 | CS
 22002 | 李四  | 女      | 2002-01-09 00:00:00 | CS
(2 rows)
```

【查询 2】



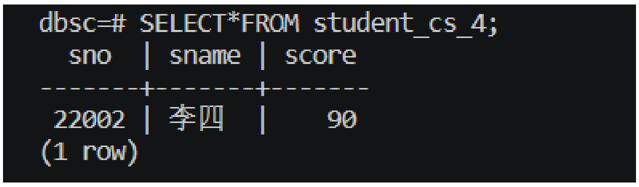
```
dbsc=# CREATE VIEW student_cs_2 AS SELECT sno, sname,sgender,sbirth,sdept FROM student WHERE sdept='CS' WITH CHECK OPTION;
CREATE VIEW
```

【查询 3】



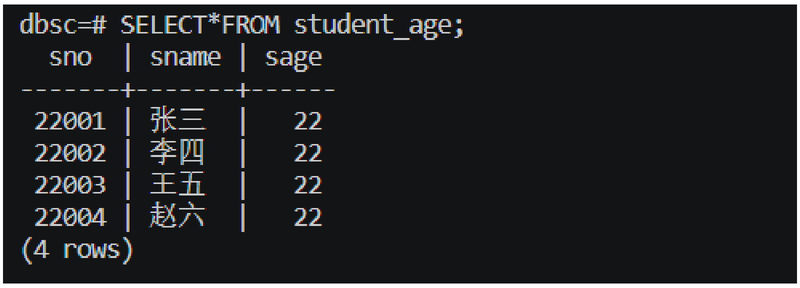
```
dbsc=# SELECT*FROM student_cs_3;
  sno   | sname | score
-------+-------+-------
 22001 | 张三  |    85
 22002 | 李四  |    90
(2 rows)
```

【查询 4】



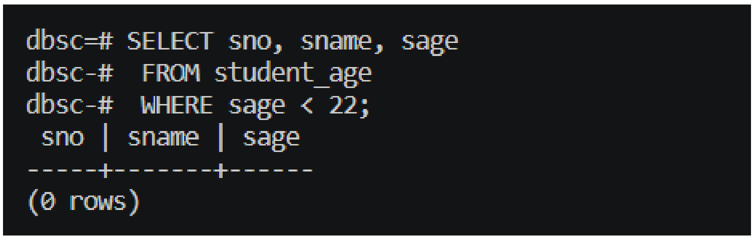
```
dbsc=# SELECT*FROM student_cs_4;
  sno   | sname | score
-------+-------+-------
 22002 | 李四  |    90
(1 row)
```

【查询 5】



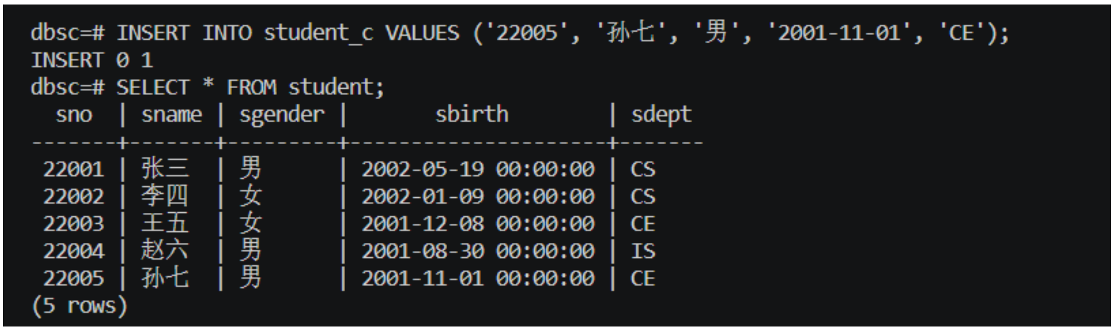
```
dbsc=# SELECT*FROM student_age;
  sno   | sname | sage
-------+-------+------
 22001 | 张三  |   22
 22002 | 李四  |   22
 22003 | 王五  |   22
 22004 | 赵六  |   22
(4 rows)
```

【查询 6】

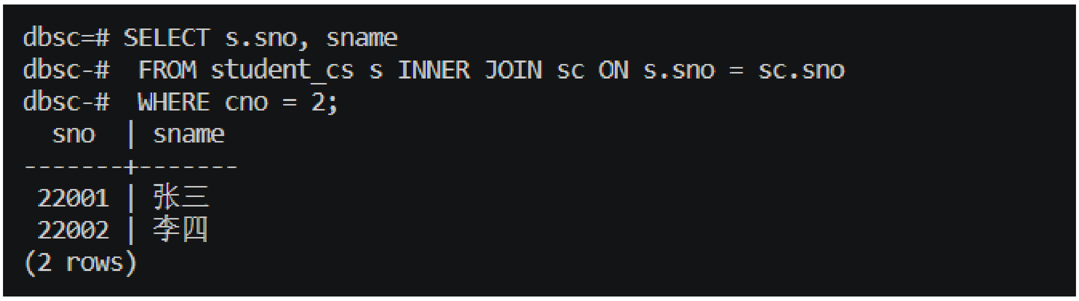


```
dbsc=# SELECT sno, sname, sage
dbsc-#  FROM student_age
dbsc-#  WHERE sage < 22;
 sno | sname | sage
-----+-------+------
(0 rows)
```

【查询 7】

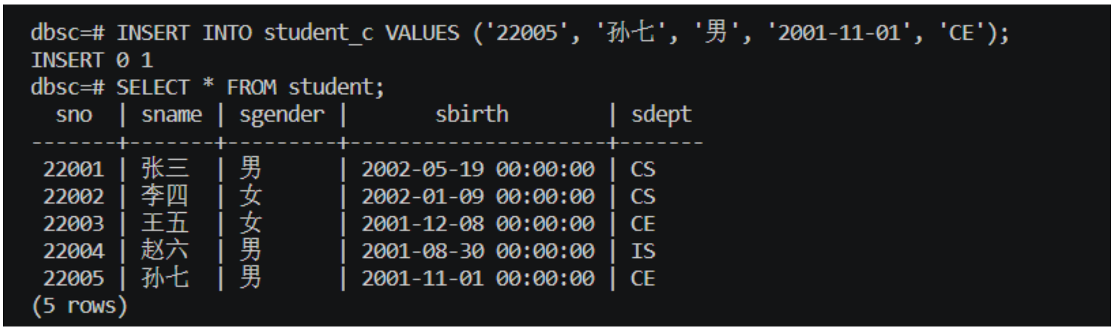


```
dbsc=# INSERT INTO student_c VALUES ('22005', '孙七', '男', '2001-11-01', 'CE');
INSERT 0 1
dbsc=# SELECT * FROM student;
  sno  | sname | sgender |        sbirth        | sdept
-------+-------+---------+---------------------+-------
 22001 | 张三  | 男      | 2002-05-19 00:00:00 | CS
 22002 | 李四  | 女      | 2002-01-09 00:00:00 | CS
 22003 | 王五  | 女      | 2001-12-08 00:00:00 | CE
 22004 | 赵六  | 男      | 2001-08-30 00:00:00 | IS
 22005 | 孙七  | 男      | 2001-11-01 00:00:00 | CE
(5 rows)
```



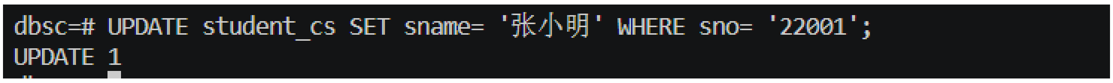
```
dbsc=# SELECT s.sno, sname
dbsc-#  FROM student_cs s INNER JOIN sc ON s.sno = sc.sno
dbsc-#  WHERE cno = 2;
  sno  | sname
-------+-------
 22001 | 张三
 22002 | 李四
(2 rows)
```

【查询 8】



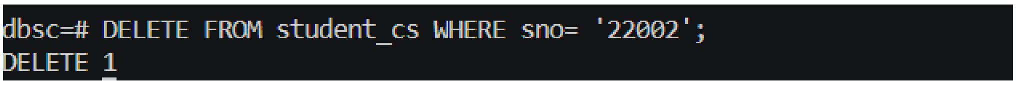
```
dbsc=# INSERT INTO student_c VALUES ('22005', '孙七', '男', '2001-11-01', 'CE');
INSERT 0 1
dbsc=# SELECT * FROM student;
  sno  | sname | sgender |        sbirth        | sdept
-------+-------+---------+---------------------+-------
 22001 | 张三  | 男      | 2002-05-19 00:00:00 | CS
 22002 | 李四  | 女      | 2002-01-09 00:00:00 | CS
 22003 | 王五  | 女      | 2001-12-08 00:00:00 | CE
 22004 | 赵六  | 男      | 2001-08-30 00:00:00 | IS
 22005 | 孙七  | 男      | 2001-11-01 00:00:00 | CE
(5 rows)
```

【查询 9】



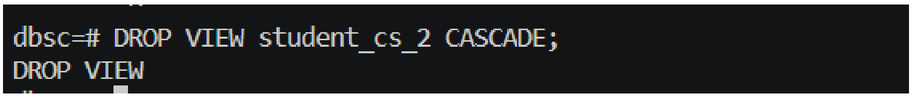
```
dbsc=# UPDATE student_cs SET sname= '张小明' WHERE sno= '22001';
UPDATE 1
```

【查询 10】



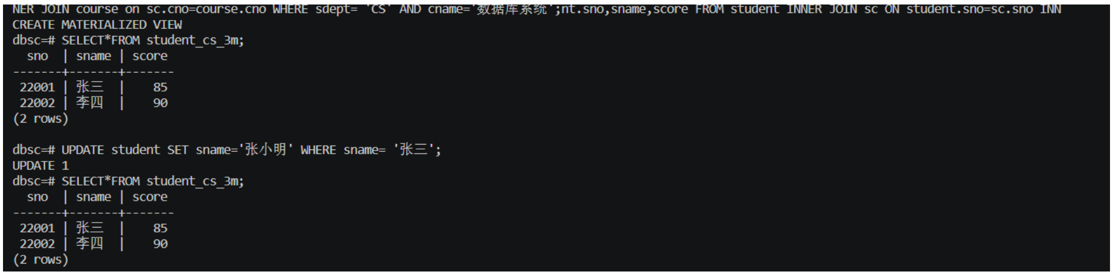
```
dbsc=# DELETE FROM student_cs WHERE sno= '22002';
DELETE 1
```

【查询 11】



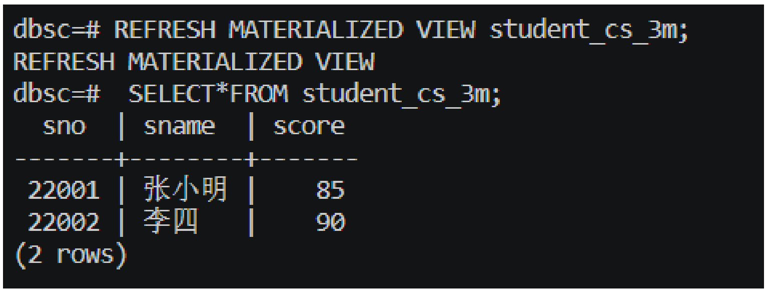
```
dbsc=# DROP VIEW student_cs_2 CASCADE;
DROP VIEW
```

【查询 12】



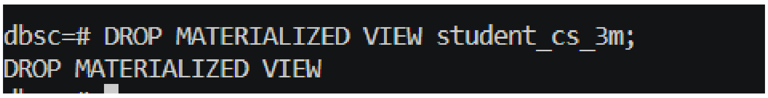
```
NER JOIN course on sc.cno=course.cno WHERE sdept= 'CS' AND cname='数据库系统';nt.sno,sname,score FROM student INNER JOIN sc ON student.sno=sc.sno INN
CREATE MATERIALIZED VIEW
dbsc=# SELECT*FROM student_cs_3m;
  sno  | sname | score
-------+-------+-------
 22001 | 张三  |    85
 22002 | 李四  |    90
(2 rows)

dbsc=# UPDATE student SET sname='张小明' WHERE sname= '张三';
UPDATE 1
dbsc=# SELECT*FROM student_cs_3m;
  sno  | sname | score
-------+-------+-------
 22001 | 张三  |    85
 22002 | 李四  |    90
(2 rows)
```

【查询 13】



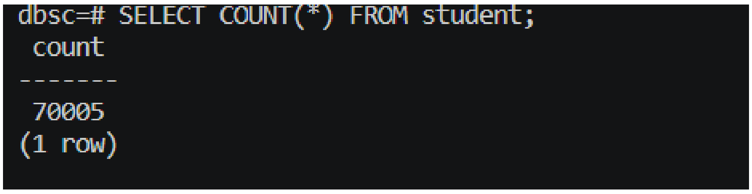
```
dbsc=# REFRESH MATERIALIZED VIEW student_cs_3m;
REFRESH MATERIALIZED VIEW
dbsc=#  SELECT*FROM student_cs_3m;
  sno  |  sname   | score
-------+---------+-------
 22001 | 张小明 |    85
 22002 | 李四   |    90
(2 rows)
```

【查询 14】

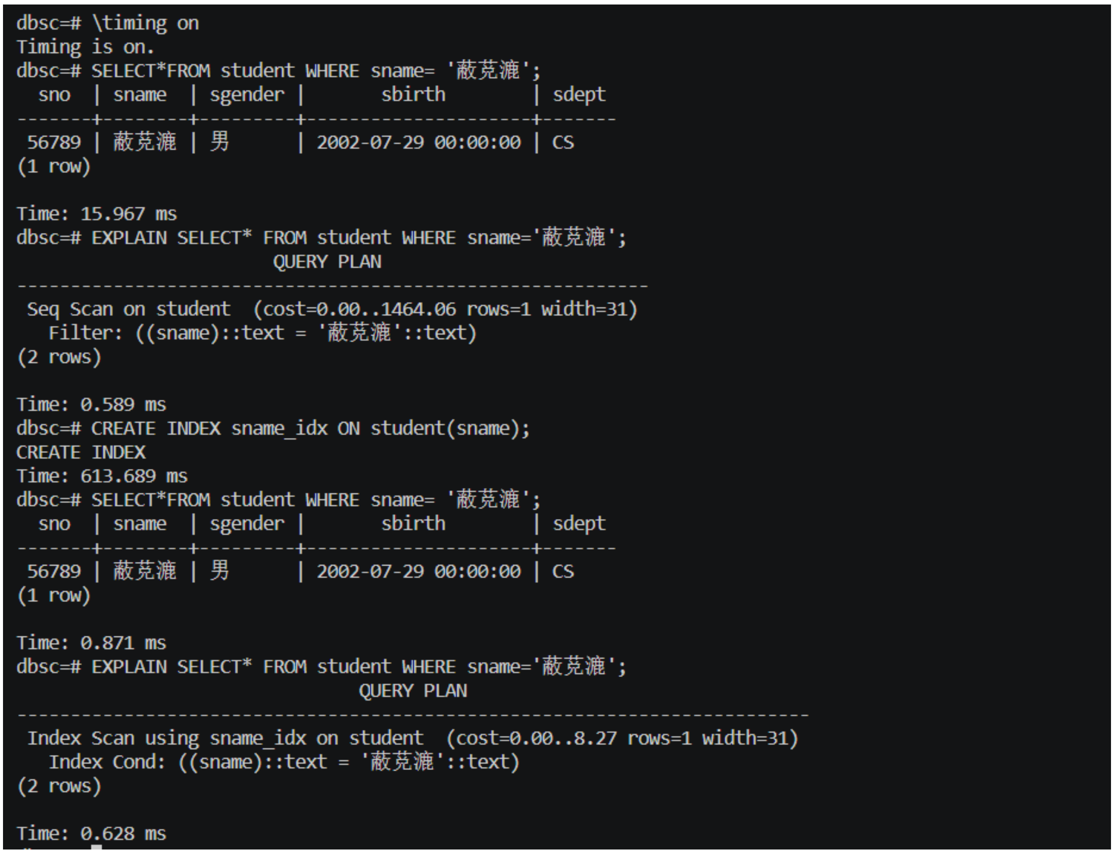


```
dbsc=# DROP MATERIALIZED VIEW student_cs_3m;
DROP MATERIALIZED VIEW
```

【查询 15】

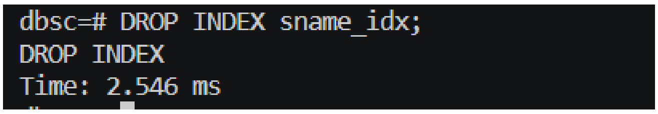


```
dbsc=# SELECT COUNT(*) FROM student;
 count
-------
 70005
(1 row)
```



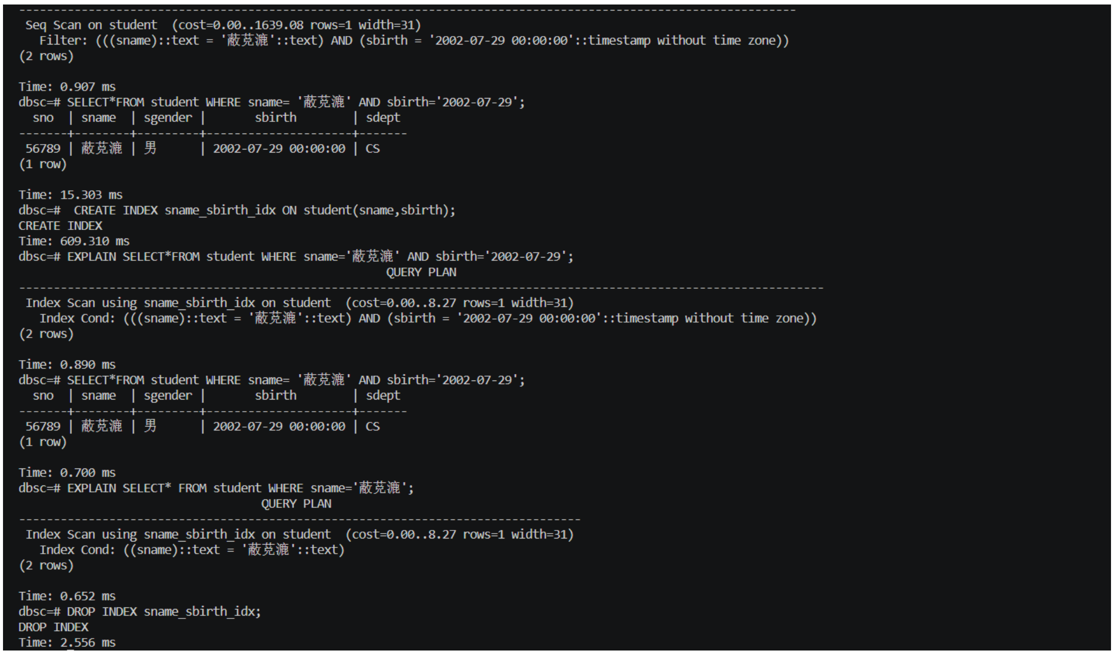
```
dbsc=# \timing on
Timing is on.
dbsc=# SELECT*FROM student WHERE sname= '蔽莐漉';
  sno  | sname  | sgender |       sbirth        | sdept
-------+--------+---------+---------------------+-------
 56789 | 蔽莐漉 | 男      | 2002-07-29 00:00:00 | CS
(1 row)

Time: 15.967 ms
dbsc=# EXPLAIN SELECT* FROM student WHERE sname='蔽莐漉';
                        QUERY PLAN
-----------------------------------------------------------
 Seq Scan on student  (cost=0.00..1464.06 rows=1 width=31)
   Filter: ((sname)::text = '蔽莐漉'::text)
(2 rows)

Time: 0.589 ms
dbsc=# CREATE INDEX sname_idx ON student(sname);
CREATE INDEX
Time: 613.689 ms
dbsc=# SELECT*FROM student WHERE sname= '蔽莐漉';
  sno  | sname  | sgender |       sbirth        | sdept
-------+--------+---------+---------------------+-------
 56789 | 蔽莐漉 | 男      | 2002-07-29 00:00:00 | CS
(1 row)

Time: 0.871 ms
dbsc=# EXPLAIN SELECT* FROM student WHERE sname='蔽莐漉';
                                QUERY PLAN
--------------------------------------------------------------------------
 Index Scan using sname_idx on student  (cost=0.00..8.27 rows=1 width=31)
   Index Cond: ((sname)::text = '蔽莐漉'::text)
(2 rows)

Time: 0.628 ms
```

【查询 16】删除索引 sname_idx。



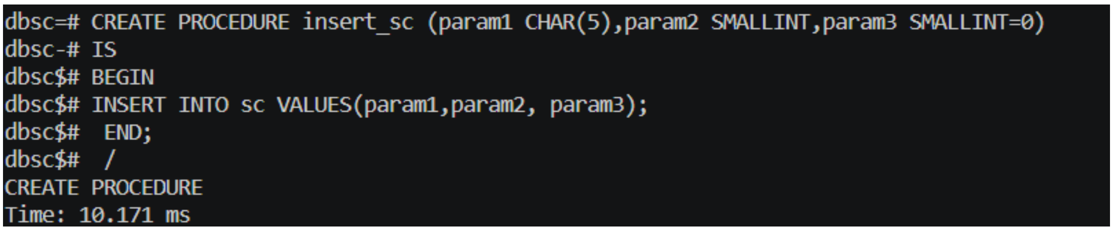
```
dbsc=# DROP INDEX sname_idx;
DROP INDEX
Time: 2.546 ms
```

【查询 17】



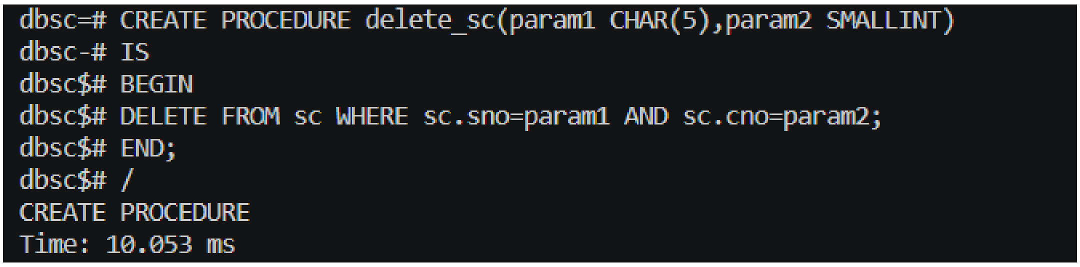
```
----------------------------------------------------------------------------------------------------------
 Seq Scan on student  (cost=0.00..1639.08 rows=1 width=31)
   Filter: (((sname)::text = '蔽莐漉'::text) AND (sbirth = '2002-07-29 00:00:00'::timestamp without time zone))
(2 rows)

Time: 0.907 ms
dbsc=# SELECT*FROM student WHERE sname= '蔽莐漉' AND sbirth='2002-07-29';
  sno  | sname  | sgender |       sbirth        | sdept
-------+--------+---------+---------------------+-------
 56789 | 蔽莐漉 | 男      | 2002-07-29 00:00:00 | CS
(1 row)

Time: 15.303 ms
dbsc=#  CREATE INDEX sname_sbirth_idx ON student(sname,sbirth);
CREATE INDEX
Time: 609.310 ms
dbsc=# EXPLAIN SELECT*FROM student WHERE sname='蔽莐漉' AND sbirth='2002-07-29';
                                                      QUERY PLAN
--------------------------------------------------------------------------------------------------------------
 Index Scan using sname_sbirth_idx on student  (cost=0.00..8.27 rows=1 width=31)
   Index Cond: (((sname)::text = '蔽莐漉'::text) AND (sbirth = '2002-07-29 00:00:00'::timestamp without time zone))
(2 rows)

Time: 0.890 ms
dbsc=# SELECT*FROM student WHERE sname= '蔽莐漉' AND sbirth='2002-07-29';
  sno  | sname  | sgender |       sbirth        | sdept
-------+--------+---------+---------------------+-------
 56789 | 蔽莐漉 | 男      | 2002-07-29 00:00:00 | CS
(1 row)

Time: 0.700 ms
dbsc=# EXPLAIN SELECT* FROM student WHERE sname='蔽莐漉';
                                   QUERY PLAN
---------------------------------------------------------------------------------
 Index Scan using sname_sbirth_idx on student  (cost=0.00..8.27 rows=1 width=31)
   Index Cond: ((sname)::text = '蔽莐漉'::text)
(2 rows)

Time: 0.652 ms
dbsc=# DROP INDEX sname_sbirth_idx;
DROP INDEX
Time: 2.556 ms
```

【查询 18】



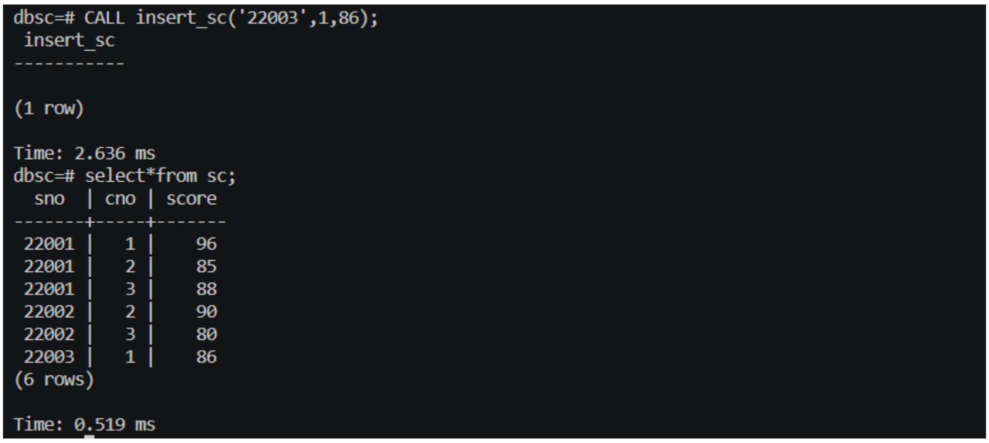
```
dbsc=# CREATE PROCEDURE insert_sc (param1 CHAR(5),param2 SMALLINT,param3 SMALLINT=0)
dbsc-# IS
dbsc$# BEGIN
dbsc$# INSERT INTO sc VALUES(param1,param2, param3);
dbsc$#  END;
dbsc$#  /
CREATE PROCEDURE
Time: 10.171 ms
```

【查询 19】



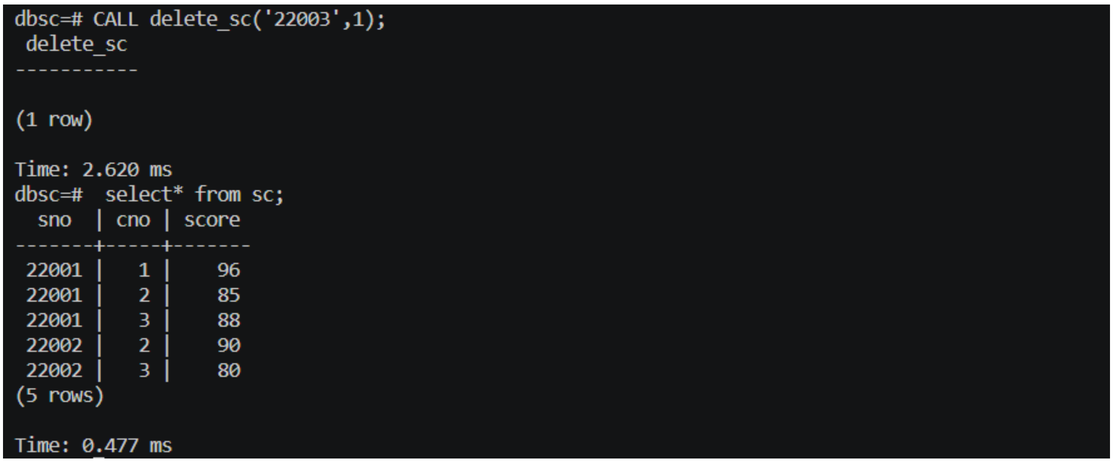
```
dbsc=# CREATE PROCEDURE delete_sc(param1 CHAR(5),param2 SMALLINT)
dbsc-# IS
dbsc$# BEGIN
dbsc$# DELETE FROM sc WHERE sc.sno=param1 AND sc.cno=param2;
dbsc$# END;
dbsc$# /
CREATE PROCEDURE
Time: 10.053 ms
```

【查询 20】



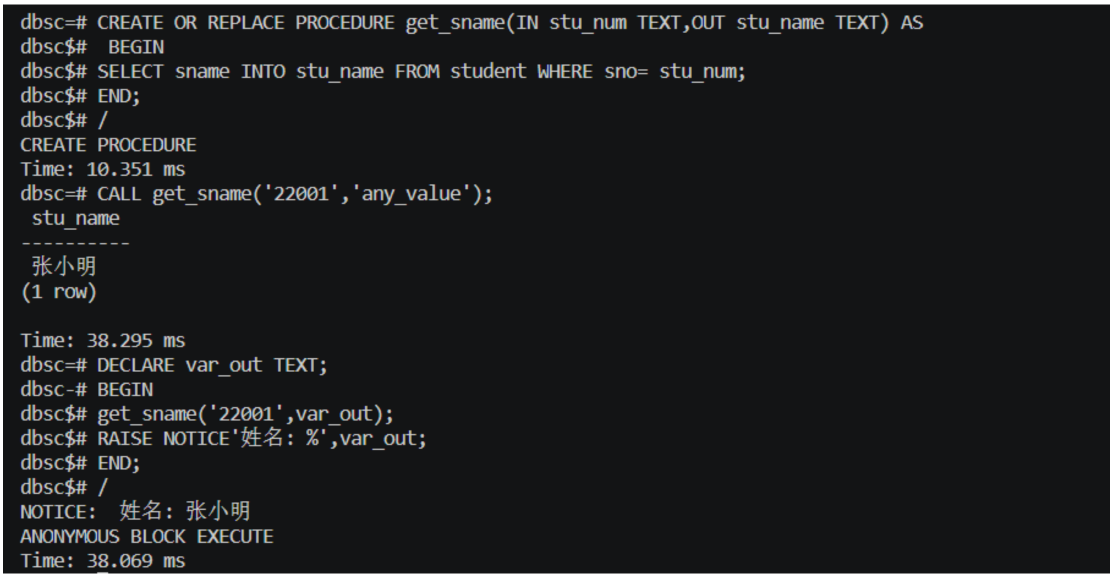
```
dbsc=# CALL insert_sc('22003',1,86);
 insert_sc
-----------

(1 row)

Time: 2.636 ms
dbsc=# select*from sc;
  sno  | cno | score
-------+-----+-------
 22001 |   1 |    96
 22001 |   2 |    85
 22001 |   3 |    88
 22002 |   2 |    90
 22002 |   3 |    80
 22003 |   1 |    86
(6 rows)

Time: 0.519 ms
```

【查询 21】



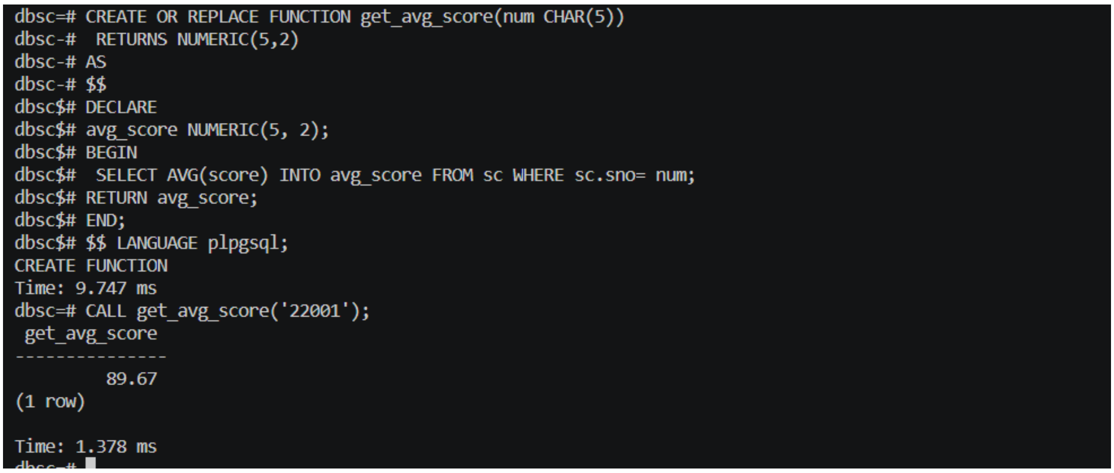
```
dbsc=# CALL delete_sc('22003',1);
 delete_sc
-----------

(1 row)

Time: 2.620 ms
dbsc=#  select* from sc;
  sno  | cno | score
-------+-----+-------
 22001 |   1 |    96
 22001 |   2 |    85
 22001 |   3 |    88
 22002 |   2 |    90
 22002 |   3 |    80
(5 rows)

Time: 0.477 ms
```

【查询 22】



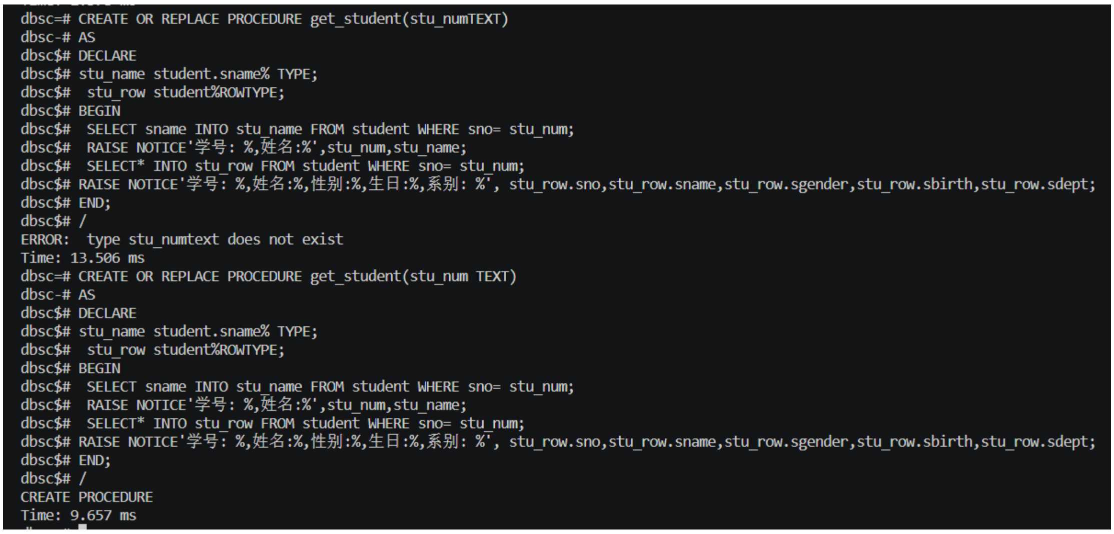
```
dbsc=# CREATE OR REPLACE PROCEDURE get_sname(IN stu_num TEXT,OUT stu_name TEXT) AS
dbsc$#  BEGIN
dbsc$# SELECT sname INTO stu_name FROM student WHERE sno= stu_num;
dbsc$# END;
dbsc$# /
CREATE PROCEDURE
Time: 10.351 ms
dbsc=# CALL get_sname('22001','any_value');
 stu_name
----------
 张小明
(1 row)

Time: 38.295 ms
dbsc=# DECLARE var_out TEXT;
dbsc-# BEGIN
dbsc$# get_sname('22001',var_out);
dbsc$# RAISE NOTICE'姓名: %',var_out;
dbsc$# END;
dbsc$# /
NOTICE:  姓名: 张小明
ANONYMOUS BLOCK EXECUTE
Time: 38.069 ms
```

【查询 23】



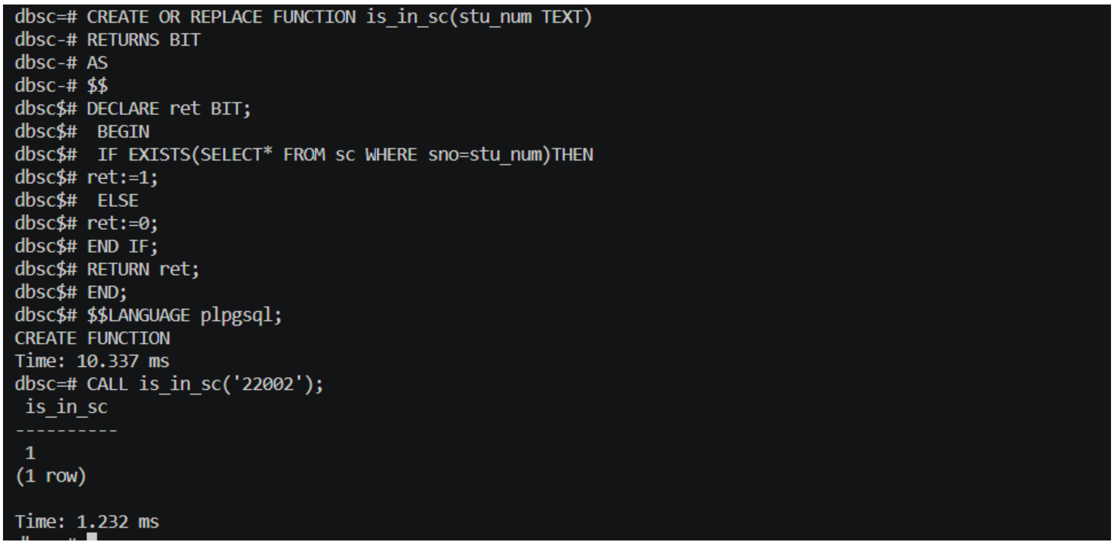
```
dbsc=# CREATE OR REPLACE FUNCTION get_avg_score(num CHAR(5))
dbsc-#  RETURNS NUMERIC(5,2)
dbsc-# AS
dbsc-# $$
dbsc$# DECLARE
dbsc$# avg_score NUMERIC(5, 2);
dbsc$# BEGIN
dbsc$#  SELECT AVG(score) INTO avg_score FROM sc WHERE sc.sno= num;
dbsc$# RETURN avg_score;
dbsc$# END;
dbsc$# $$ LANGUAGE plpgsql;
CREATE FUNCTION
Time: 9.747 ms
dbsc=# CALL get_avg_score('22001');
 get_avg_score
---------------
         89.67
(1 row)

Time: 1.378 ms
dbsc=#
```

【查询 24】



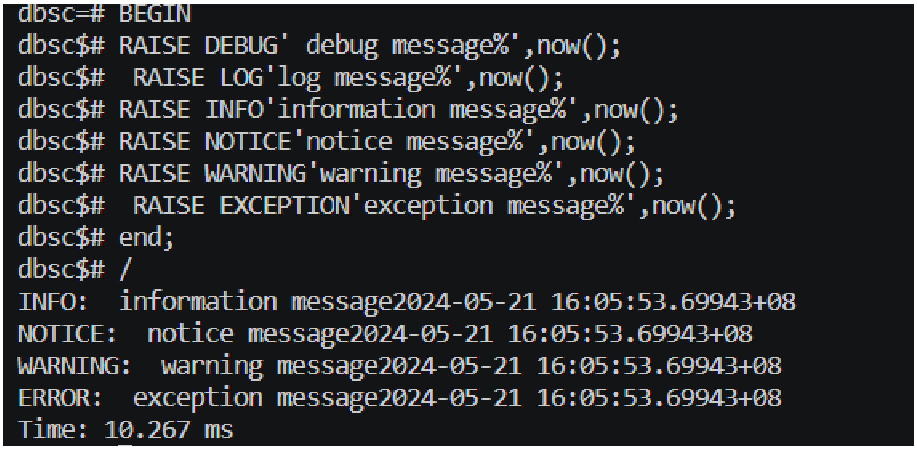
```
dbsc=# CREATE OR REPLACE PROCEDURE get_student(stu_numTEXT)
dbsc-# AS
dbsc$# DECLARE
dbsc$# stu_name student.sname% TYPE;
dbsc$#  stu_row student%ROWTYPE;
dbsc$# BEGIN
dbsc$#  SELECT sname INTO stu_name FROM student WHERE sno= stu_num;
dbsc$#  RAISE NOTICE'学号: %,姓名:%',stu_num,stu_name;
dbsc$#  SELECT* INTO stu_row FROM student WHERE sno= stu_num;
dbsc$# RAISE NOTICE'学号: %,姓名:%,性别:%,生日:%,系别: %', stu_row.sno,stu_row.sname,stu_row.sgender,stu_row.sbirth,stu_row.sdept;
dbsc$# END;
dbsc$# /
ERROR:  type stu_numtext does not exist
Time: 13.506 ms
dbsc=# CREATE OR REPLACE PROCEDURE get_student(stu_num TEXT)
dbsc-# AS
dbsc$# DECLARE
dbsc$# stu_name student.sname% TYPE;
dbsc$#  stu_row student%ROWTYPE;
dbsc$# BEGIN
dbsc$#  SELECT sname INTO stu_name FROM student WHERE sno= stu_num;
dbsc$#  RAISE NOTICE'学号: %,姓名:%',stu_num,stu_name;
dbsc$#  SELECT* INTO stu_row FROM student WHERE sno= stu_num;
dbsc$# RAISE NOTICE'学号: %,姓名:%,性别:%,生日:%,系别: %', stu_row.sno,stu_row.sname,stu_row.sgender,stu_row.sbirth,stu_row.sdept;
dbsc$# END;
dbsc$# /
CREATE PROCEDURE
Time: 9.657 ms
```

【查询 25】



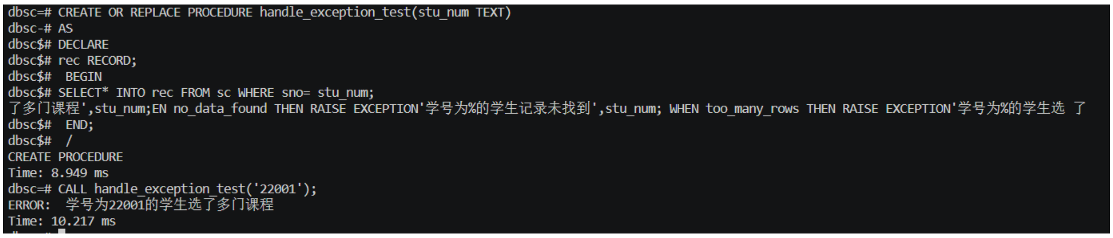
```
dbsc=# CREATE OR REPLACE FUNCTION is_in_sc(stu_num TEXT)
dbsc-# RETURNS BIT
dbsc-# AS
dbsc-# $$
dbsc$# DECLARE ret BIT;
dbsc$#  BEGIN
dbsc$#  IF EXISTS(SELECT* FROM sc WHERE sno=stu_num)THEN
dbsc$# ret:=1;
dbsc$#  ELSE
dbsc$# ret:=0;
dbsc$# END IF;
dbsc$# RETURN ret;
dbsc$# END;
dbsc$# $$LANGUAGE plpgsql;
CREATE FUNCTION
Time: 10.337 ms
dbsc=# CALL is_in_sc('22002');
 is_in_sc
----------
 1
(1 row)

Time: 1.232 ms
```

【查询 26】



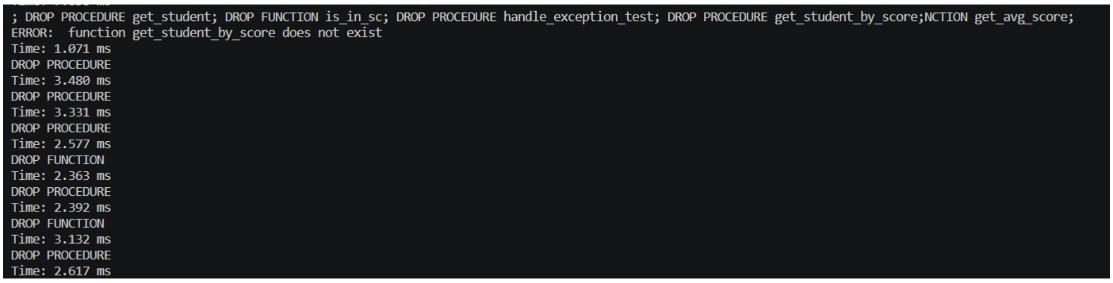
```
dbsc=# BEGIN
dbsc$# RAISE DEBUG' debug message%',now();
dbsc$#  RAISE LOG'log message%',now();
dbsc$# RAISE INFO'information message%',now();
dbsc$# RAISE NOTICE'notice message%',now();
dbsc$# RAISE WARNING'warning message%',now();
dbsc$#  RAISE EXCEPTION'exception message%',now();
dbsc$# end;
dbsc$# /
INFO:  information message2024-05-21 16:05:53.69943+08
NOTICE:  notice message2024-05-21 16:05:53.69943+08
WARNING:  warning message2024-05-21 16:05:53.69943+08
ERROR:  exception message2024-05-21 16:05:53.69943+08
Time: 10.267 ms
```

【查询 27】



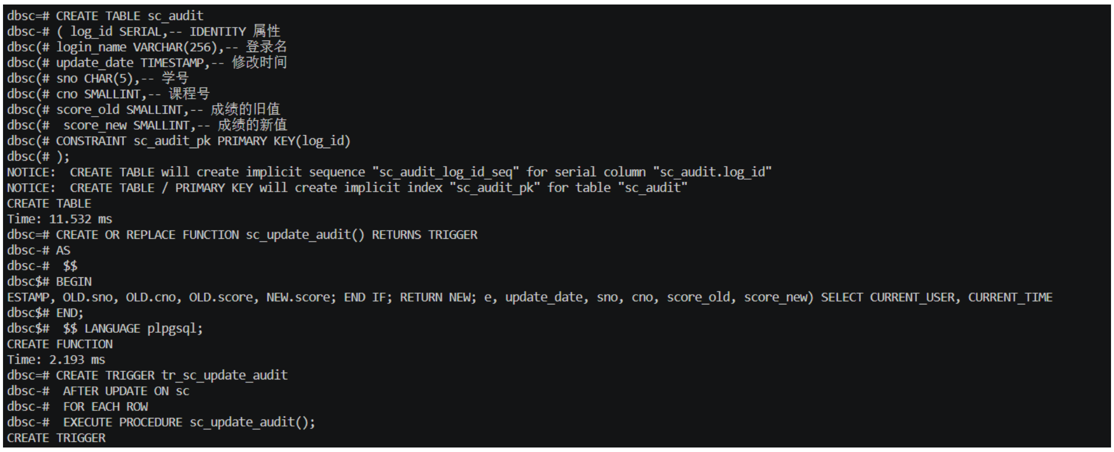
```
dbsc=# CREATE OR REPLACE PROCEDURE handle_exception_test(stu_num TEXT)
dbsc-# AS
dbsc$# DECLARE
dbsc$# rec RECORD;
dbsc$#  BEGIN
dbsc$# SELECT* INTO rec FROM sc WHERE sno= stu_num;
了多门课程',stu_num;EN no_data_found THEN RAISE EXCEPTION'学号为%的学生记录未找到',stu_num; WHEN too_many_rows THEN RAISE EXCEPTION'学号为%的学生选 了
dbsc$#  END;
dbsc$#  /
CREATE PROCEDURE
Time: 8.949 ms
dbsc=# CALL handle_exception_test('22001');
ERROR:  学号为22001的学生选了多门课程
Time: 10.217 ms
```

【查询 29】

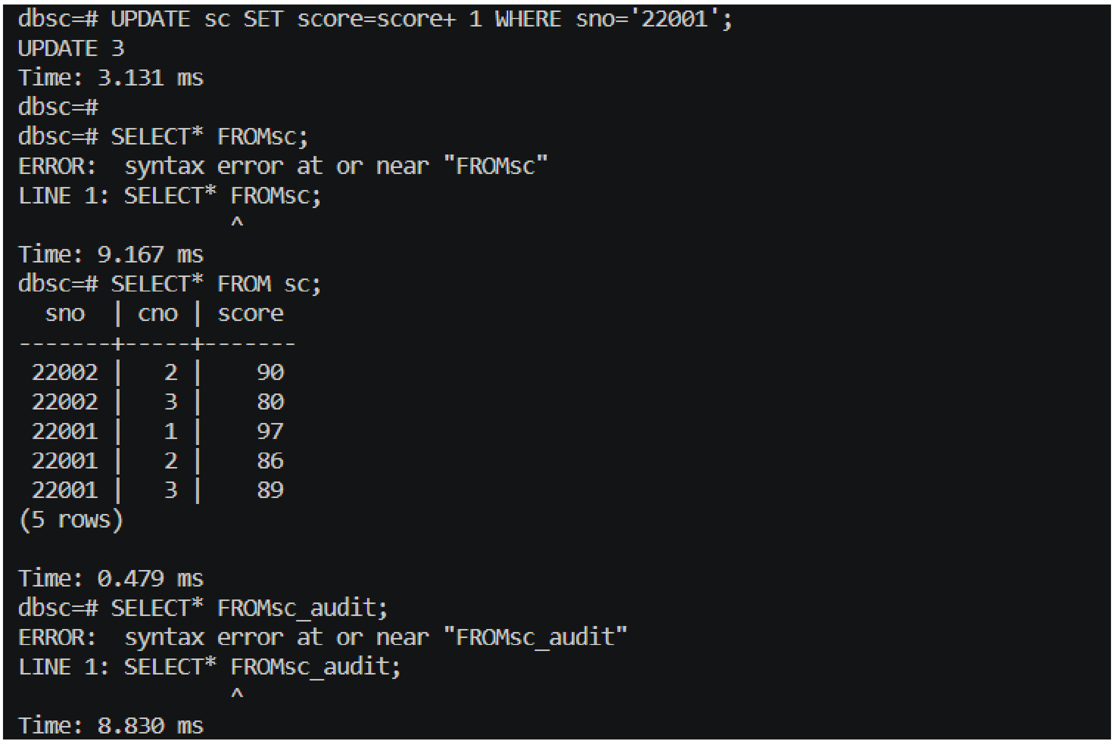


```
; DROP PROCEDURE get_student; DROP FUNCTION is_in_sc; DROP PROCEDURE handle_exception_test; DROP PROCEDURE get_student_by_score;NCTION get_avg_score;
ERROR:  function get_student_by_score does not exist
Time: 1.071 ms
DROP PROCEDURE
Time: 3.480 ms
DROP PROCEDURE
Time: 3.331 ms
DROP PROCEDURE
Time: 2.577 ms
DROP FUNCTION
Time: 2.363 ms
DROP PROCEDURE
Time: 2.392 ms
DROP FUNCTION
Time: 3.132 ms
DROP PROCEDURE
Time: 2.617 ms
```

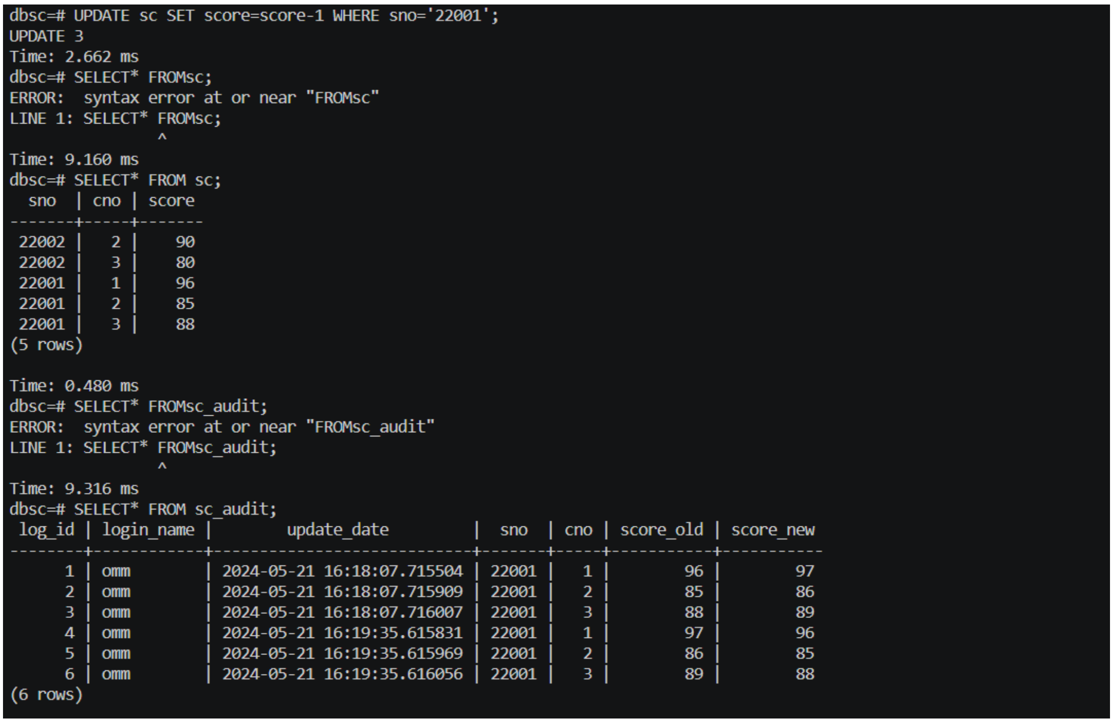
【查询 30】



```
dbsc=# CREATE TABLE sc_audit
dbsc-# ( log_id SERIAL,-- IDENTITY 属性
dbsc(# login_name VARCHAR(256),-- 登录名
dbsc(# update_date TIMESTAMP,-- 修改时间
dbsc(# sno CHAR(5),-- 学号
dbsc(# cno SMALLINT,-- 课程号
dbsc(# score_old SMALLINT,-- 成绩的旧值
dbsc(#  score_new SMALLINT,-- 成绩的新值
dbsc(# CONSTRAINT sc_audit_pk PRIMARY KEY(log_id)
dbsc(# );
NOTICE:  CREATE TABLE will create implicit sequence "sc_audit_log_id_seq" for serial column "sc_audit.log_id"
NOTICE:  CREATE TABLE / PRIMARY KEY will create implicit index "sc_audit_pk" for table "sc_audit"
CREATE TABLE
Time: 11.532 ms
dbsc=# CREATE OR REPLACE FUNCTION sc_update_audit() RETURNS TRIGGER
dbsc-# AS
dbsc-#  $$
dbsc$# BEGIN
ESTAMP, OLD.sno, OLD.cno, OLD.score, NEW.score; END IF; RETURN NEW; e, update_date, sno, cno, score_old, score_new) SELECT CURRENT_USER, CURRENT_TIME
dbsc$# END;
dbsc$#  $$ LANGUAGE plpgsql;
CREATE FUNCTION
Time: 2.193 ms
dbsc=# CREATE TRIGGER tr_sc_update_audit
dbsc-#  AFTER UPDATE ON sc
dbsc-#  FOR EACH ROW
dbsc-#  EXECUTE PROCEDURE sc_update_audit();
CREATE TRIGGER
```

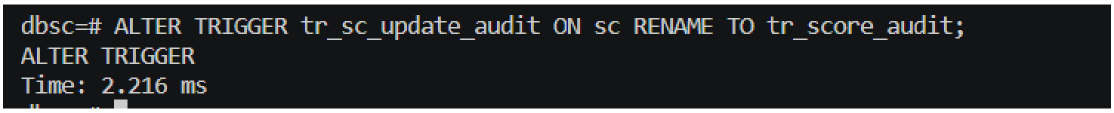


```
dbsc=# UPDATE sc SET score=score+ 1 WHERE sno='22001';
UPDATE 3
Time: 3.131 ms
dbsc=#
dbsc=# SELECT* FROMsc;
ERROR:  syntax error at or near "FROMsc"
LINE 1: SELECT* FROMsc;
                ^
Time: 9.167 ms
dbsc=# SELECT* FROM sc;
  sno  | cno | score
-------+-----+-------
 22002 |   2 |    90
 22002 |   3 |    80
 22001 |   1 |    97
 22001 |   2 |    86
 22001 |   3 |    89
(5 rows)

Time: 0.479 ms
dbsc=# SELECT* FROMsc_audit;
ERROR:  syntax error at or near "FROMsc_audit"
LINE 1: SELECT* FROMsc_audit;
                ^
Time: 8.830 ms
```



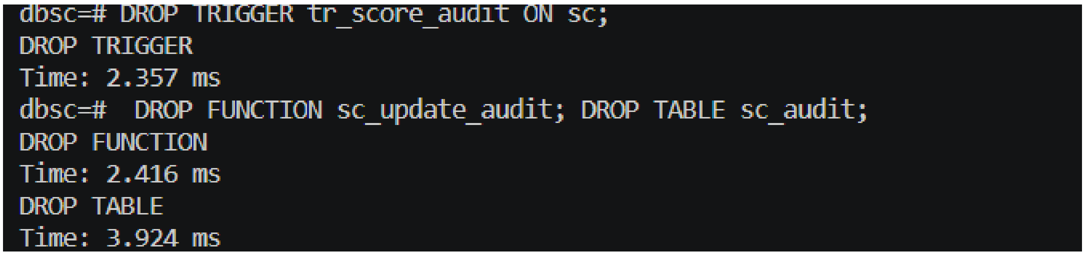
```
dbsc=# UPDATE sc SET score=score-1 WHERE sno='22001';
UPDATE 3
Time: 2.662 ms
dbsc=# SELECT* FROMsc;
ERROR:  syntax error at or near "FROMsc"
LINE 1: SELECT* FROMsc;
                ^
Time: 9.160 ms
dbsc=# SELECT* FROM sc;
  sno  | cno | score
-------+-----+-------
 22002 |   2 |    90
 22002 |   3 |    80
 22001 |   1 |    96
 22001 |   2 |    85
 22001 |   3 |    88
(5 rows)

Time: 0.480 ms
dbsc=# SELECT* FROMsc_audit;
ERROR:  syntax error at or near "FROMsc_audit"
LINE 1: SELECT* FROMsc_audit;
                ^
Time: 9.316 ms
dbsc=# SELECT* FROM sc_audit;
 log_id | login_name |         update_date          |  sno  | cno | score_old | score_new
--------+------------+----------------------------+-------+-----+-----------+-----------
      1 | omm        | 2024-05-21 16:18:07.715504 | 22001 |   1 |        96 |        97
      2 | omm        | 2024-05-21 16:18:07.715909 | 22001 |   2 |        85 |        86
      3 | omm        | 2024-05-21 16:18:07.716007 | 22001 |   3 |        88 |        89
      4 | omm        | 2024-05-21 16:19:35.615831 | 22001 |   1 |        97 |        96
      5 | omm        | 2024-05-21 16:19:35.615969 | 22001 |   2 |        86 |        85
      6 | omm        | 2024-05-21 16:19:35.616056 | 22001 |   3 |        89 |        88
(6 rows)
```

【查询 31】



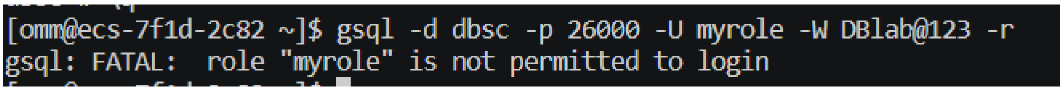
```
dbsc=# ALTER TRIGGER tr_sc_update_audit ON sc RENAME TO tr_score_audit;
ALTER TRIGGER
Time: 2.216 ms
```

【查询 32】



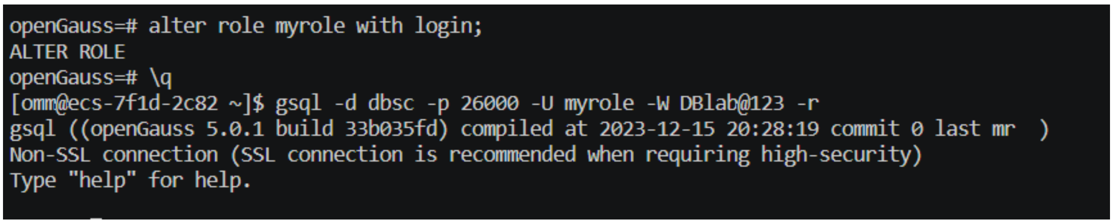
```
dbsc=# DROP TRIGGER tr_score_audit ON sc;
DROP TRIGGER
Time: 2.357 ms
dbsc=#  DROP FUNCTION sc_update_audit; DROP TABLE sc_audit;
DROP FUNCTION
Time: 2.416 ms
DROP TABLE
Time: 3.924 ms
```

【查询 33】



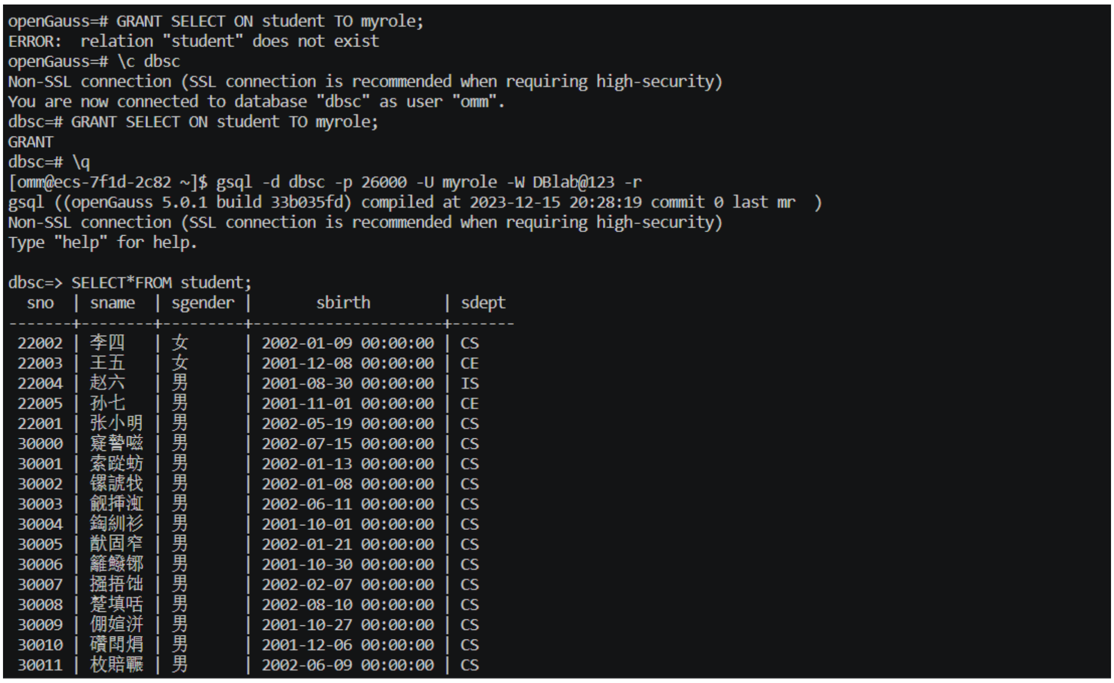
```
[omm@ecs-7f1d-2c82 ~]$ gsql -d dbsc -p 26000 -U myrole -W DBlab@123 -r
gsql: FATAL:  role "myrole" is not permitted to login
```

【查询 34】



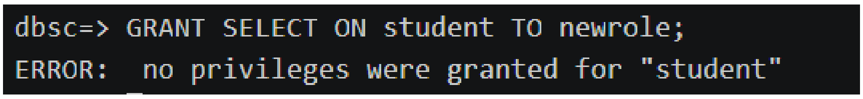
```
openGauss=# alter role myrole with login;
ALTER ROLE
openGauss=# \q
[omm@ecs-7f1d-2c82 ~]$ gsql -d dbsc -p 26000 -U myrole -W DBlab@123 -r
gsql ((openGauss 5.0.1 build 33b035fd) compiled at 2023-12-15 20:28:19 commit 0 last mr  )
Non-SSL connection (SSL connection is recommended when requiring high-security)
Type "help" for help.
```

【查询 35】

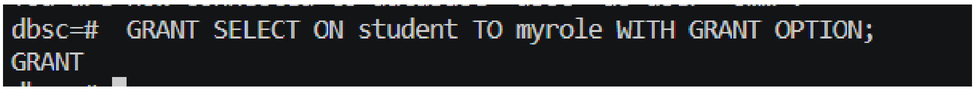


```
openGauss=# GRANT SELECT ON student TO myrole;
ERROR:  relation "student" does not exist
openGauss=# \c dbsc
Non-SSL connection (SSL connection is recommended when requiring high-security)
You are now connected to database "dbsc" as user "omm".
dbsc=# GRANT SELECT ON student TO myrole;
GRANT
dbsc=# \q
[omm@ecs-7f1d-2c82 ~]$ gsql -d dbsc -p 26000 -U myrole -W DBlab@123 -r
gsql ((openGauss 5.0.1 build 33b035fd) compiled at 2023-12-15 20:28:19 commit 0 last mr  )
Non-SSL connection (SSL connection is recommended when requiring high-security)
Type "help" for help.

dbsc=> SELECT*FROM student;
  sno  | sname  | sgender |       sbirth        | sdept
-------+--------+---------+---------------------+-------
 22002 | 李四   | 女      | 2002-01-09 00:00:00 | CS
 22003 | 王五   | 女      | 2001-12-08 00:00:00 | CE
 22004 | 赵六   | 男      | 2001-08-30 00:00:00 | IS
 22005 | 孙七   | 男      | 2001-11-01 00:00:00 | CE
 22001 | 张小明 | 男      | 2002-05-19 00:00:00 | CS
 30000 | 寱礬嗞 | 男      | 2002-07-15 00:00:00 | CS
 30001 | 紊蹝蚄 | 男      | 2002-01-13 00:00:00 | CS
 30002 | 镙誮牪 | 男      | 2002-01-08 00:00:00 | CS
 30003 | 覷捙洍 | 男      | 2002-06-11 00:00:00 | CS
 30004 | 鍧紃衫 | 男      | 2001-10-01 00:00:00 | CS
 30005 | 猒固窄 | 男      | 2002-01-21 00:00:00 | CS
 30006 | 籬鰟铘 | 男      | 2001-10-30 00:00:00 | CS
 30007 | 搔捂饳 | 男      | 2002-02-07 00:00:00 | CS
 30008 | 楚填咶 | 男      | 2002-08-10 00:00:00 | CS
 30009 | 倗媗洴 | 男      | 2001-10-27 00:00:00 | CS
 30010 | 磺閆焆 | 男      | 2001-12-06 00:00:00 | CS
 30011 | 枚賠韊 | 男      | 2002-06-09 00:00:00 | CS
```

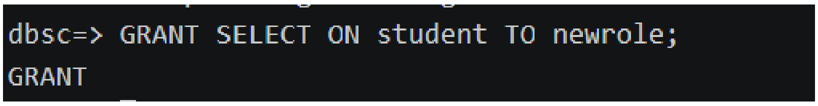
【查询 36】



```
dbsc=> GRANT SELECT ON student TO newrole;
ERROR:  no privileges were granted for "student"
```

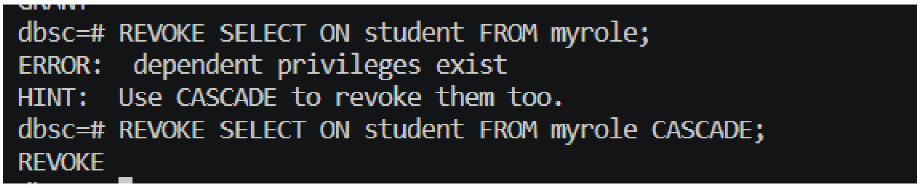


```
dbsc=#  GRANT SELECT ON student TO myrole WITH GRANT OPTION;
GRANT
```



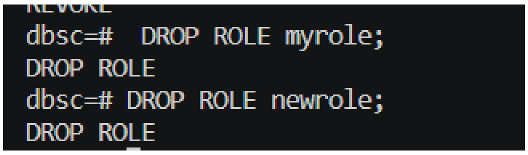
```
dbsc=> GRANT SELECT ON student TO newrole;
GRANT
```

【查询 37】



```
dbsc=# REVOKE SELECT ON student FROM myrole;
ERROR:  dependent privileges exist
HINT:  Use CASCADE to revoke them too.
dbsc=# REVOKE SELECT ON student FROM myrole CASCADE;
REVOKE
```

【查询 38】



```
dbsc=#  DROP ROLE myrole;
DROP ROLE
dbsc=# DROP ROLE newrole;
DROP ROLE
```