

静态嵌入式， 查询一个元组， localhost

```
#include<stdio.h>
```

```
int main()
```

```
{
```

```
EXEC SQL WHENEVER SQLWARNING SQLPRINT;
```

```
EXEC SQL WHENEVER SQLERROR SQLPRINT;
```

```
EXEC SQL CONNECT TO postgres@localhost:5432 USER postgres USING '123456';
```

```
EXEC SQL BEGIN DECLARE SECTION;
```

```
int mm;
```

```
char tt[20]="abcd";
```

```
int yy;
```

```
EXEC SQL END DECLARE SECTION;
```

```
mm=2;
```

```
yy=9;
```

```
printf("11mm=%d, tt=%s, yy=%d!\n",mm,tt,yy);
```

```
scanf("%d",&mm);
```

```
printf("22mm=%d, tt=%s, yy=%d!\n",mm,tt,yy);
```

```
EXEC SQL SELECT eename,eeyear
```

```
INTO :tt,:yy
```

```
FROM public.exam
```

```
WHERE eeid=:mm;
```

```
EXEC SQL DISCONNECT;
```

```
printf("33mm=%d, tt=%s, yy=%d!\n",mm,tt,yy);
```

```
return 0;
```

```
}
```

编辑数据 - Postgresql96 (192.168.1.101:5432) - postgres - public.exam

文件(F) 编辑(E) 视图(V) 工具(T) 帮助(H)

不限制

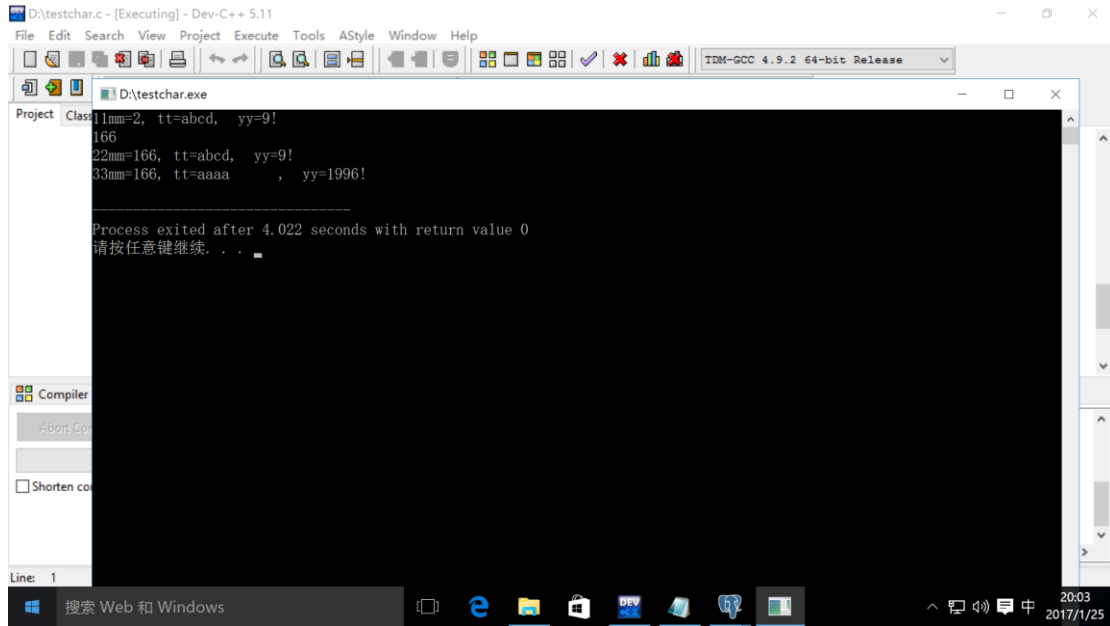
	eeid [PK] integer	eename character(10)	eeyear integer
1	166	aaaa	1996
2	189	north	4001
3	198	south	1998
4	199	west	2000
5	200	bbbb	1999
6	222	east	7999
7	269	cccc	7992
8	369	dddd	7994
*			

便笺簿

8 行

搜索 Web 和 Windows

20:03 2017/1/25



静态嵌入式，IP 链接，修改

```
#include<stdio.h>
```

```
int main()
```

```
{
```

```
EXEC SQL WHENEVER SQLWARNING SQLPRINT;
```

```
EXEC SQL WHENEVER SQLERROR SQLPRINT;
```

```
EXEC SQL CONNECT TO postgres@192.168.1.101:5432 USER postgres USING '123456';
```

```
EXEC SQL BEGIN DECLARE SECTION;
```

```
int mm;
```

```
char tt[20]="abcd";
```

```
int yy;
```

```
EXEC SQL END DECLARE SECTION;
```

```
mm=2;
```

```
yy=9;
```

```
printf("11mm=%d, tt=%s, yy=%d!\n",mm,tt,yy);
```

```
scanf("%d",&mm);
```

```
printf("22mm=%d, tt=%s, yy=%d!\n",mm,tt,yy);
```

```
EXEC SQL SELECT eename,eeyear
```

```
INTO :tt,:yy
```

```
FROM public.exam
```

```
WHERE eeid=:mm;
```

```
printf("33mm=%d, tt=%s, yy=%d!\n",mm,tt,yy);
```

```
EXEC SQL UPDATE public.exam
```

```
SET eeyear=eeyear+2000
```

```
WHERE eeid=:mm;
```

```
EXEC SQL SELECT eename,eeyear
```

```

        INTO :tt,:yy
        FROM public.exam
        WHERE eeid=:mm;
printf("44mm=%d, tt=%s, yy=%d!\n",mm,tt,yy);
EXEC SQL UPDATE public.exam
        SET eeyear=eeyear-2000
        WHERE eeid=:mm;
EXEC SQL SELECT eeename,eeeyear
        INTO :tt,:yy
        FROM public.exam
        WHERE eeid=:mm;
printf("55mm=%d, tt=%s, yy=%d!\n",mm,tt,yy);
EXEC SQL DISCONNECT;
printf("66mm=%d, tt=%s, yy=%d!\n",mm,tt,yy);
return 0;
}

```

编辑数据 - Postgresql96 (192.168.1.101:5432) - postgres - public.exam

文件(F) 编辑(E) 视图(V) 工具(T) 帮助(H)

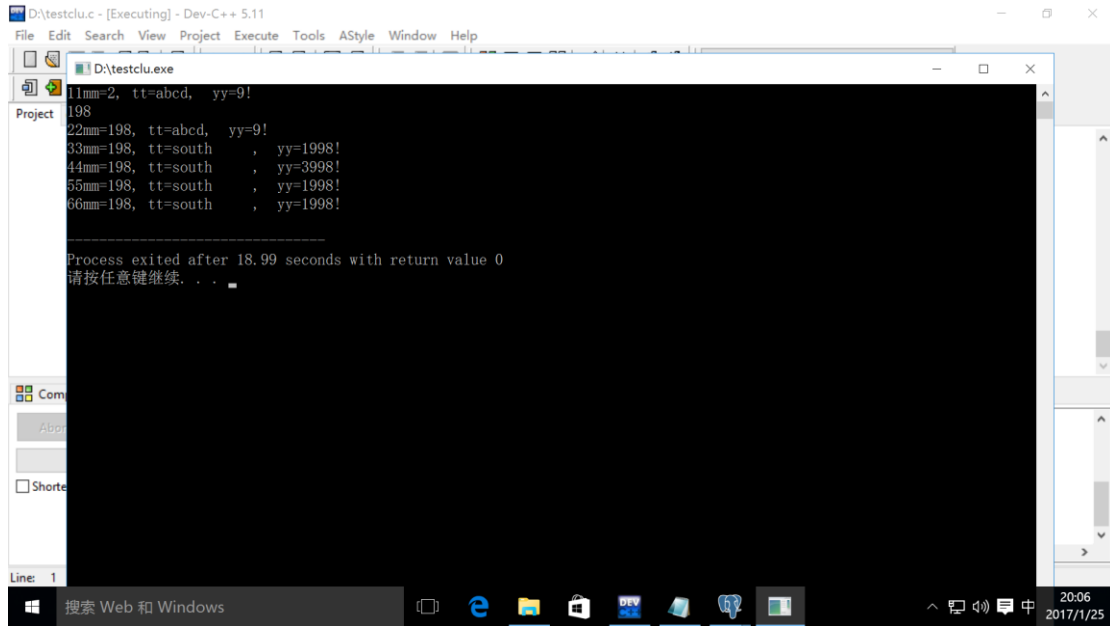
不限制

	eeid [PK] integer	eeename character(10)	eeeyear integer
1	166	aaaa	1996
2	189	north	4001
3	198	south	1998
4	199	west	2000
5	200	bbbb	1999
6	222	east	7999
7	269	cccc	7992
8	369	dddd	7994
*			

8行

搜索 Web 和 Windows

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```
D:\testclu.c - [Executing] - Dev-C++ 5.11
File Edit Search View Project Execute Tools AStyle Window Help

D:\testclu.exe
11mm=2, tt=abcd, yy=9!
198
22mm=198, tt=abcd, yy=9!
33mm=198, tt=south, yy=1998!
44mm=198, tt=south, yy=3998!
55mm=198, tt=south, yy=1998!
66mm=198, tt=south, yy=1998!

-----
Process exited after 18.99 seconds with return value 0
请按任意键继续. . .
```

Cursor, 循环取元组

```
#include<stdio.h>
```

```
int main()
```

```
{
```

```
EXEC SQL WHENEVER SQLWARNING SQLPRINT;
```

```
EXEC SQL WHENEVER SQLERROR SQLPRINT;
```

```
EXEC SQL CONNECT TO postgres@192.168.1.101:5432 USER postgres USING '123456';
```

```
EXEC SQL BEGIN DECLARE SECTION;
```

```
int mm;
```

```
char tt[20]="abcd";
```

```
int yy;
```

```
EXEC SQL END DECLARE SECTION;
```

```
mm=189;
```

```
yy=9;
```

```
EXEC SQL DECLARE queryc CURSOR FOR
```

```
SELECT eeid,eeename,eeeyear
```

```
FROM public.exam ;
```

```
printf("11mm=%d, tt=%s, yy=%d!\n",mm,tt,yy);
```

```
EXEC SQL OPEN queryc;
```

```
do
```

```
{
```

```
EXEC SQL FETCH FROM queryc
```

```
INTO :mm,:tt,:yy;
```

```
if (!strcmp(SQLSTATE,"02000"))break;
```

```
printf("66mm=%d, tt=%s, yy=%d!\n",mm,tt,yy);
```

```

}while (strcmp(SQLSTATE,"02000"));
EXEC SQL DISCONNECT;
printf("8mm=%d, tt=%s, yy=%d!\n",mm,tt,yy);
return 0;
}

```

编辑数据 - Postgresql96 (192.168.1.101:5432) - postgres - public.exam

文件(F) 编辑(E) 视图(V) 工具(T) 帮助(H)

不限制

	eeid [PK] integer	eeename character(10)	eeeyear integer
1	166	aaaa	1996
2	189	north	2001
3	198	south	1998
4	199	west	2000
5	200	bbbb	1999
6	222	east	1999
7	269	cccc	1992
8	369	dddd	1994
*			

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8行

D:\testclucursor.c - Dev-C++ 5.11

File Edit Search View Project Execute Tools AStyle Window Help

```

D:\testclucursor.exe
11mm=189, tt=abcd, yy=9!
66mm=198, tt=south, yy=1998!
66mm=166, tt=aaaa, yy=1996!
66mm=200, tt=bbbb, yy=1999!
66mm=199, tt=west, yy=2000!
66mm=222, tt=east, yy=1999!
66mm=269, tt=cccc, yy=1992!
66mm=369, tt=dddd, yy=1994!
66mm=189, tt=north, yy=2001!
88mm=189, tt=north, yy=2001!

Process exited after 0.03126 seconds with return value 0
请按任意键继续. . .

```

Line: 1

Scroll cursor 自由滑动

```
#include<stdio.h>
```

```
int main()
```

```
{
```

```
EXEC SQL WHENEVER SQLWARNING SQLPRINT;
```

```
EXEC SQL WHENEVER SQLERROR SQLPRINT;
```

```
EXEC SQL CONNECT TO postgres@192.168.1.101:5432 USER postgres USING '123456';
```

```
EXEC SQL BEGIN DECLARE SECTION;
```

```
int mm;
```

```
char tt[20]="abcd";
```

```
int yy;
```

```
int i=0;
```

```
EXEC SQL END DECLARE SECTION;
```

```
EXEC SQL DECLARE querycc SCROLL CURSOR FOR
```

```
SELECT eeid,ename,eyear
```

```
FROM public.exam ;
```

```
EXEC SQL OPEN querycc;
```

```
do
```

```
{ i=i+1;
```

```
EXEC SQL FETCH FROM querycc
```

```
INTO :mm,:tt,:yy;
```

```
if (!strcmp(SQLSTATE,"02000"))break;
```

```
printf("%d%dmm=%d, tt=%s, yy=%d!\n",i,i,mm,tt,yy);
```

```
}while (strcmp(SQLSTATE,"02000"));
```

```
EXEC SQL DECLARE queryc SCROLL CURSOR FOR
```

```
SELECT eeid,ename,eyear
```

```
FROM public.exam ;
```

```
EXEC SQL OPEN queryc;
```

```
EXEC SQL FETCH NEXT FROM queryc
```

```
INTO :mm,:tt,:yy;
```

```
if (strcmp(SQLSTATE,"02000"))
```

```
printf("NEXTmm=%d, tt=%s, yy=%d!\n",mm,tt,yy);
```

```
EXEC SQL FETCH LAST FROM queryc
```

```
INTO :mm,:tt,:yy;
```

```
if (strcmp(SQLSTATE,"02000"))
```

```
printf("LASTmm=%d, tt=%s, yy=%d!\n",mm,tt,yy);
```

```
EXEC SQL FETCH NEXT FROM queryc
```

```
INTO :mm,:tt,:yy;
```

```
if (strcmp(SQLSTATE,"02000"))
printf("NEXTmm=%d, tt=%s, yy=%d!\n",mm,tt,yy);
```

```
EXEC SQL FETCH FIRST FROM queryc
      INTO :mm,:tt,:yy;
if (strcmp(SQLSTATE,"02000"))
printf("FIRSTmm=%d, tt=%s, yy=%d!\n",mm,tt,yy);
```

```
EXEC SQL FETCH NEXT FROM queryc
      INTO :mm,:tt,:yy;
if (strcmp(SQLSTATE,"02000"))
printf("NEXTmm=%d, tt=%s, yy=%d!\n",mm,tt,yy);
```

```
EXEC SQL FETCH relative -1 FROM queryc
      INTO :mm,:tt,:yy;
if (strcmp(SQLSTATE,"02000"))
printf("-1mm=%d, tt=%s, yy=%d!\n",mm,tt,yy);
```

```
EXEC SQL FETCH relative -2 FROM queryc
      INTO :mm,:tt,:yy;
if (strcmp(SQLSTATE,"02000"))
printf("-2mm=%d, tt=%s, yy=%d!\n",mm,tt,yy);
```

```
EXEC SQL FETCH relative -2 FROM queryc
      INTO :mm,:tt,:yy;
if (strcmp(SQLSTATE,"02000"))
printf("-2mm=%d, tt=%s, yy=%d!\n",mm,tt,yy);
```

```
EXEC SQL FETCH FIRST FROM queryc
      INTO :mm,:tt,:yy;
if (strcmp(SQLSTATE,"02000"))
printf("FIRSTmm=%d, tt=%s, yy=%d!\n",mm,tt,yy);
```

```
EXEC SQL FETCH LAST FROM queryc
      INTO :mm,:tt,:yy;
if (strcmp(SQLSTATE,"02000"))
printf("LASTmm=%d, tt=%s, yy=%d!\n",mm,tt,yy);
```

```
EXEC SQL CLOSE querycc;
EXEC SQL CLOSE queryc;
```

EXEC SQL DISCONNECT;

return 0;  
}

	eeid [PK] integer	eename character(10)	eeyear integer
1	166	aaaa	1996
2	189	north	2001
3	198	south	1998
4	199	west	2000
5	200	bbbb	1999
6	222	east	1999
7	269	cccc	1992
8	369	dddd	1994
*			

```
11mm=198, tt=south      , yy=1998!  
22mm=166, tt=aaaa      , yy=1996!  
33mm=200, tt=bbbb      , yy=1999!  
44mm=199, tt=west      , yy=2000!  
55mm=222, tt=east      , yy=1999!  
66mm=269, tt=cccc      , yy=1992!  
77mm=369, tt=dddd      , yy=1994!  
88mm=189, tt=north     , yy=2001!  
NEXTmm=198, tt=south   , yy=1998!  
LASTmm=189, tt=north   , yy=2001!  
FIRSTmm=198, tt=south  , yy=1998!  
NEXTmm=166, tt=aaaa    , yy=1996!  
-1mm=198, tt=south     , yy=1998!  
FIRSTmm=198, tt=south  , yy=1998!  
LASTmm=189, tt=north   , yy=2001!  
  
-----  
Process exited after 0.04386 seconds with return value 0  
请按任意键继续. . .
```



②动态构造 pgSQL 语句，对数据进行更新。

```
#include<stdio.h>
```

```
int main()
```

```
{
```

```
EXEC SQL WHENEVER SQLWARNING SQLPRINT;
```

```
EXEC SQL WHENEVER SQLERROR SQLPRINT;
```

```
EXEC SQL CONNECT TO postgres@192.168.1.101:5432 USER postgres USING '123456';
```

```
EXEC SQL BEGIN DECLARE SECTION;
```

```
char *tt="update exam set eeyear=eeyear+? where eeid=?";
```

```
char *ttc="commit";
```

```
int ii=199;int jj=20000;
```

```
EXEC SQL END DECLARE SECTION;
```

```
EXEC SQL PREPARE mmtt from :tt;
```

```
EXEC SQL EXECUTE mmtt USING :jj,:ii;
```

```
EXEC SQL EXECUTE IMMEDIATE :ttc;
```

```
EXEC SQL DISCONNECT;
```

```
return 0;
```

```
}
```

执行前数据库状态：

	eeid [PK] integer	eeename character(10)	eeeyear integer
1	166	aaaa	1996
2	189	north	2001
3	198	south	1998
4	199	west	2000
5	200	bbbb	1999
6	222	east	1999
7	269	cccc	1992
8	369	dddd	1994
*			

执行后数据库状态：

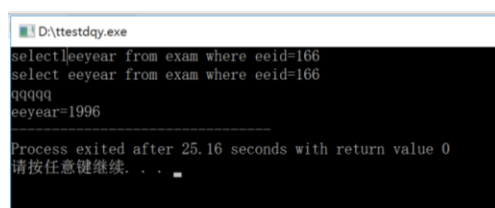
	eeid [PK] integer	eeename character(10)	eeeyear integer
1	166	aaaa	1996
2	189	north	2001
3	198	south	1998
4	199	west	22000
5	200	bbbb	1999
6	222	east	1999
7	269	cccc	1992
8	369	dddd	1994
*			

如果定义了 SCROLL，那么游标可以向后滚动；如果定义了 NO SCROLL，那么向后取的动作会被拒绝；如果二者都没有定义，那么是否进行向后取的动作会根据查询来判断。

① 执行从键盘输入的一个 pgSQL 语句，查询一个数据项。

```
#include<stdio.h>
int main()
{
EXEC SQL WHENEVER SQLWARNING SQLPRINT;
EXEC SQL WHENEVER SQLERROR SQLPRINT;
EXEC SQL CONNECT TO postgres@192.168.1.101:5432 USER postgres USING '123456';
EXEC SQL BEGIN DECLARE SECTION;
    char *tt,str[100];
    int ii,jj;
EXEC SQL END DECLARE SECTION;
tt=str;
scanf("%[^\\n]",tt);
printf("%s\\n",tt);
printf("qqqqq\\n",tt);
EXEC SQL PREPARE mystmt FROM :tt;
EXEC SQL EXECUTE mystmt INTO :ii;
printf("eeyear=%d",ii);
EXEC SQL DISCONNECT;
return 0;
}
```

	eeid [PK] integer	eeename character(10)	eeeyear integer
1	166	aaaa	1996
2	189	north	2001
3	198	south	1998
4	199	west	22000
5	200	bbbb	1999
6	222	east	1999
7	269	cccc	1992
8	369	dddd	1994
*			



```
D:\testday.exe
select|eeyear from exam where eeid=166
select eeyear from exam where eeid=166
qqqqq
eeyear=1996
-----
Process exited after 25.16 seconds with return value 0
请按任意键继续. . .
```