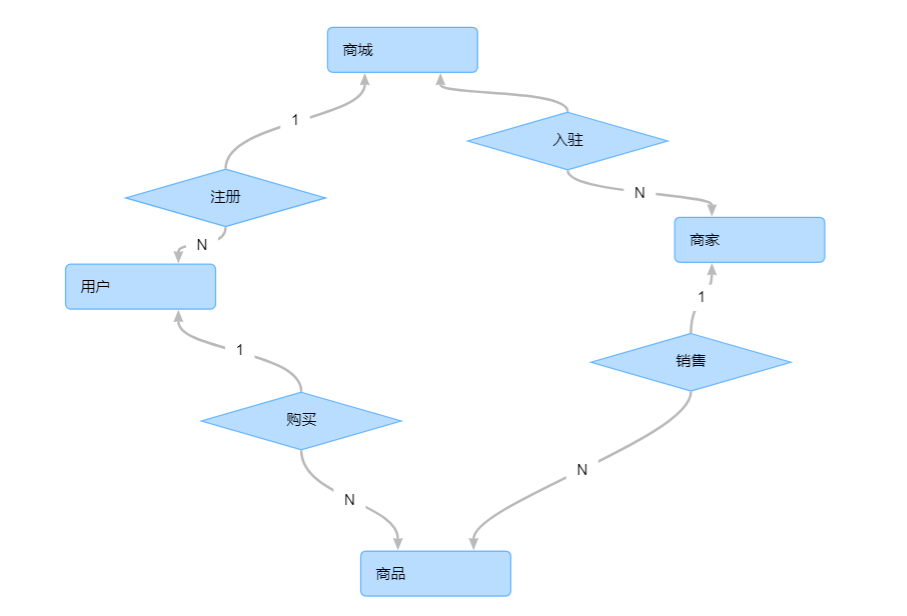
## 1.领域模型创建



## 2.建表sql语句

**create** **schema** onlinestore;

**CREATE** **TABLE** "onlinestore"."seller" ( "user\_id" **int** **NOT** **NULL** , "user\_name" **VARCHAR**(20), "user\_address" **int**, "telephone" **VARCHAR**(20), "password" **VARCHAR**(20), "email" **VARCHAR**(30), "sex" **CHAR**(1), "age" **int**, "registe\_time" **DATE**, "year\_month" **VARCHAR**(10),**PRIMARY** **KEY** ( "user\_id" ) );

**COMMENT** **ON** **TABLE** "onlinestore"."seller" **IS** '商家信息';

**COMMENT** **ON** **COLUMN** "onlinestore"."seller"."user\_id" **IS** '用户id';

**COMMENT** **ON** **COLUMN** "onlinestore"."seller"."user\_name" **IS** '用户名';

**COMMENT** **ON** **COLUMN** "onlinestore"."seller"."user\_address" **IS** '地址id';

**COMMENT** **ON** **COLUMN** "onlinestore"."seller"."telephone" **IS** '电话';

**COMMENT** **ON** **COLUMN** "onlinestore"."seller"."password" **IS** '密码';

**COMMENT** **ON** **COLUMN** "onlinestore"."seller"."email" **IS** '邮件';

**COMMENT** **ON** **COLUMN** "onlinestore"."seller"."sex" **IS** '性别';

**COMMENT** **ON** **COLUMN** "onlinestore"."seller"."age" **IS** '年龄';

**COMMENT** **ON** **COLUMN** "onlinestore"."seller"."registe\_time" **IS** '注册时间';

**COMMENT** **ON** **COLUMN** "onlinestore"."seller"."year\_month" **IS** '注册年月';

**CREATE** **TABLE** "onlinestore"."buyer" ( "user\_id" **int** **NOT** **NULL** , "user\_name" **character** **varying**(20), "user\_address" **int**, "telephone" **VARCHAR**(20), "password" **VARCHAR**(20), "email" **VARCHAR**(30), "sex" **CHAR**(1), "age" **int**, "registe\_time" **DATE**, "year\_month" **VARCHAR**(10),**PRIMARY** **KEY** ( "user\_id" ) );

**COMMENT** **ON** **TABLE** "onlinestore"."buyer" **IS** '买家';

**COMMENT** **ON** **COLUMN** "onlinestore"."buyer"."user\_id" **IS** '用户id';

**COMMENT** **ON** **COLUMN** "onlinestore"."buyer"."user\_name" **IS** '用户名';

**COMMENT** **ON** **COLUMN** "onlinestore"."buyer"."user\_address" **IS** '地址id';

**COMMENT** **ON** **COLUMN** "onlinestore"."buyer"."telephone" **IS** '电话';

**COMMENT** **ON** **COLUMN** "onlinestore"."buyer"."password" **IS** '密码';

**COMMENT** **ON** **COLUMN** "onlinestore"."buyer"."email" **IS** '邮件';

**COMMENT** **ON** **COLUMN** "onlinestore"."buyer"."sex" **IS** '性别';

**COMMENT** **ON** **COLUMN** "onlinestore"."buyer"."age" **IS** '年龄';

**COMMENT** **ON** **COLUMN** "onlinestore"."buyer"."registe\_time" **IS** '注册时间';

**COMMENT** **ON** **COLUMN** "onlinestore"."buyer"."year\_month" **IS** '注册年月';

**CREATE** **TABLE** onlinestore."sell\_info" ( "year\_month" **VARCHAR**(10) **NOT** **NULL** , "city" **VARCHAR**(20) **NOT** **NULL** , "sex" **CHAR**(1) **NOT** **NULL** , "cate\_id" **int** **NOT** **NULL** , "payment" **FLOAT4**,**PRIMARY** **KEY** ( "year\_month" , "city" , "sex" , "cate\_id" ) );

**COMMENT** **ON** **TABLE** "onlinestore"."sell\_info" **IS** '销售信息';

**COMMENT** **ON** **COLUMN** "onlinestore"."sell\_info"."year\_month" **IS** '年月';

**COMMENT** **ON** **COLUMN** "onlinestore"."sell\_info"."city" **IS** '城市';

**COMMENT** **ON** **COLUMN** "onlinestore"."sell\_info"."sex" **IS** '性别';

**COMMENT** **ON** **COLUMN** "onlinestore"."sell\_info"."cate\_id" **IS** '类别id';

**COMMENT** **ON** **COLUMN** "onlinestore"."sell\_info"."payment" **IS** '金额'

**CREATE** **TABLE** "onlinestore"."address" ( "address\_id" **int** **NOT** **NULL** , "province" **VARCHAR**(20), "city" **VARCHAR**(20), "detail\_address" **VARCHAR**(100),**PRIMARY** **KEY** ( "address\_id" ) );

**COMMENT** **ON** **TABLE** "onlinestore"."address" **IS** '地址info';

**COMMENT** **ON** **COLUMN** "onlinestore"."address"."address\_id" **IS** '地址id';

**COMMENT** **ON** **COLUMN** "onlinestore"."address"."province" **IS** '省份';

**COMMENT** **ON** **COLUMN** "onlinestore"."address"."city" **IS** '市';

**COMMENT** **ON** **COLUMN** "onlinestore"."address"."detail\_address" **IS** '具体地址';

**CREATE** **TABLE** "onlinestore"."order" ( "order\_id" **int** **NOT** **NULL** , "sku\_id" **int**, "number" **int**, "total\_payment" **FLOAT4**, "order\_time" **DATE**, "buyer\_id" **int**, "address\_id" **int**, "order\_state" **int**, "year\_month" **VARCHAR**(10),**PRIMARY** **KEY** ( "order\_id" ) );

**COMMENT** **ON** **TABLE** "onlinestore"."order" **IS** '订单';

**COMMENT** **ON** **COLUMN** "onlinestore"."order"."order\_id" **IS** 'order\_id';

**COMMENT** **ON** **COLUMN** "onlinestore"."order"."sku\_id" **IS** 'sku\_id';

**COMMENT** **ON** **COLUMN** "onlinestore"."order"."number" **IS** '数量';

**COMMENT** **ON** **COLUMN** "onlinestore"."order"."total\_payment" **IS** '总额';

**COMMENT** **ON** **COLUMN** "onlinestore"."order"."order\_time" **IS** '订单时间';

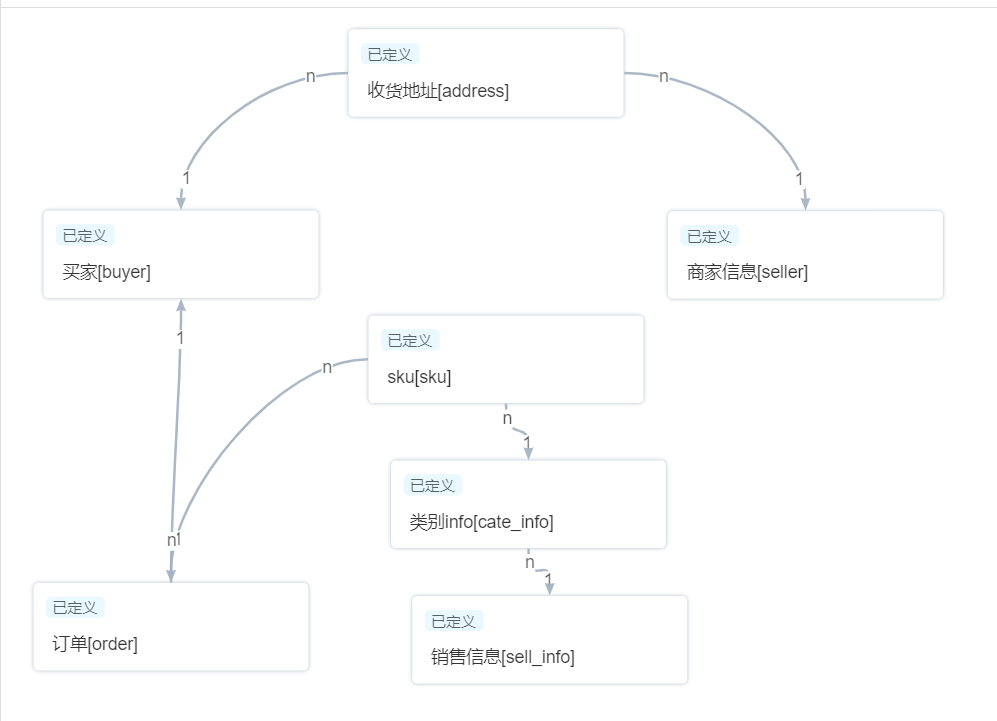
**COMMENT** **ON** **COLUMN** "onlinestore"."order"."buyer\_id" **IS** 'buyer\_id';

**COMMENT** **ON** **COLUMN** "onlinestore"."order"."address\_id" **IS** 'address\_id';

**COMMENT** **ON** **COLUMN** "onlinestore"."order"."order\_state" **IS** '订单状态';

**COMMENT** **ON** **COLUMN** "onlinestore"."order"."year\_month" **IS** '年月';

## 2.物理模型创建



## 4.插入数据来进行数据查询

**insert** **into** onlinestore.address **values**(0,'广东省','东莞市','黄江');

**insert** **into** onlinestore.address **values**(1,'广东省','东莞市','常平');

**insert** **into** onlinestore.address **values**(2,'广东省','广州市','番禺');

**insert** **into** onlinestore.address **values**(3,'广东省','珠海市','横琴');--买家

**insert** **into** onlinestore.buyer **values** (0,'user1',0,'13713070889','password1','abcd@qq.com','1',21,**to\_date**('20210702','yyyymmdd'),'2021-07');

**insert** **into** onlinestore.buyer **values** (1,'user2',1,'13713070889','password1','abcd@qq.com','0',21,**to\_date**('20210702','yyyymmdd'),'2021-07');

**insert** **into** onlinestore.buyer **values** (2,'user3',2,'13713070889','password1','abcd@qq.com','1',21,**to\_date**('20210602','yyyymmdd'),'2021-06');

**insert** **into** onlinestore.buyer **values** (3,'user4',3,'13713070889','password1','abcd@qq.com','1',21,**to\_date**('20210502','yyyymmdd'),'2021-05');

**insert** **into** onlinestore.seller **values** (0,'seller0',3,'13713070889','password1','abcd@qq.com','1',21,**to\_date**('20210502','yyyymmdd'),'2021-05');

**insert** **into** onlinestore.cate\_info **values**(0,'电子设备');

**insert** **into** onlinestore.cate\_info **values**(1,'衣服');

**insert** **into** onlinestore.cate\_info **values**(2,'零食');

**insert** **into** onlinestore.sku **values**(0,0,0,0,100);

**insert** **into** onlinestore.sku **values**(1,0,0,1,200);

**insert** **into** onlinestore.sku **values**(2,0,1,0,150);

**insert** **into** onlinestore.sku **values**(3,0,2,1,100);

**insert** **into** onlinestore."order" **values**(0,0,1,100,**to\_date**('20210102','yyyymmdd'),0,0,1,'2021-01');

**insert** **into** onlinestore."order" **values**(1,1,1,100,**to\_date**('20210102','yyyymmdd'),0,0,1,'2021-01');

**insert** **into** onlinestore."order" **values**(2,1,1,100,**to\_date**('20210202','yyyymmdd'),1,1,1,'2021-02');

**insert** **into** onlinestore."order" **values**(3,0,1,100,**to\_date**('20210302','yyyymmdd'),3,3,1,'2021-03');

**insert** **into** onlinestore."order" **values**(4,3,1,100,**to\_date**('20210402','yyyymmdd'),2,2,1,'2021-04');

**insert** **into** onlinestore."order" **values**(5,3,1,100,**to\_date**('20210102','yyyymmdd'),0,0,1,'2021-01');

**insert** **into** onlinestore."order" **values**(6,0,1,100,**to\_date**('20210302','yyyymmdd'),3,1,1,'2021-03');

**insert** **into** onlinestore."order" **values**(7,0,1,100,**to\_date**('20210102','yyyymmdd'),1,1,1,'2021-01');

## 5.按月查看注册人数

**select** year\_month,**sum**("人数") "注册人数" **from** (

(**select** year\_month, **count**(year\_month) "人数"

**from** onlinestore.buyer bi **group** **by** year\_month

) **union** **all**

(**select** year\_month , **count**(year\_month ) "人数"

**from** onlinestore.seller si **group** **by** year\_month )) a **group** **by** year\_month ;



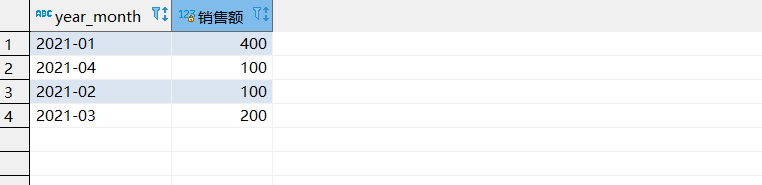
## 6.按月查看总体销售额

**select** year\_month, **sum**(total\_payment ) "销售额"

**from** "hbcEc2"."order" o

**where** order\_state = 1

**group** **by** year\_month;



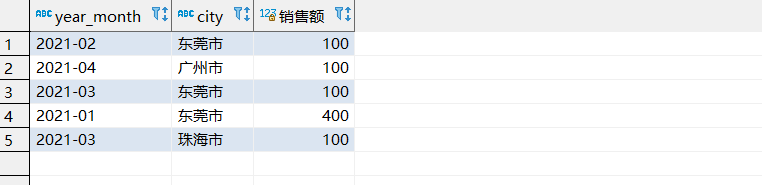
## 7.按月城市查看销售额

**select** year\_month , a.city , **sum**(total\_payment ) "销售额"

**from** onlinestore."order" o , onlinestore.address a

**where** o.address\_id = a.address\_id

**group** **by** year\_month ,a.city;



## 8.按月查看城市，商品总类的销售额

**select** o.year\_month , ci.cate\_name , a.city ,**sum**(total\_payment ) "销售额"

**from** onlinestore."order" o , onlinestore.sku s , onlinestore.cate\_info ci, onlinestore.address a

**where** o.sku\_id =s.sku\_id **and** s.cate\_id = ci.cate\_id **and** o.address\_id = a.address\_id

**group** **by** year\_month , ci.cate\_name , a.city;



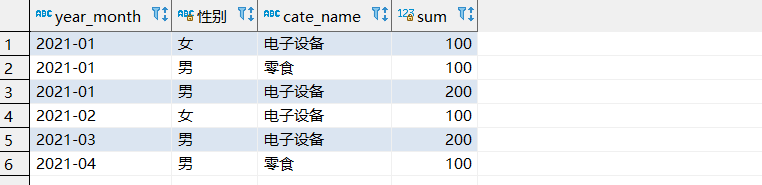
## 10.按月查看性别，商品类别的销售额

**select** o.year\_month , **case** bi.sex **when** '1' **then** '男' **else** '女' **end** **as** 性别, ci.cate\_name , **sum**(total\_payment )

**from** onlinestore."order" o , onlinestore.buyer bi ,onlinestore.sku s ,onlinestore.cate\_info ci

**where** o.buyer\_id = bi.user\_id **and** o.sku\_id =s.sku\_id **and** s.cate\_id =ci.cate\_id

**group** **by** o.year\_month , bi.sex ,ci.cate\_name



## 11.数据质量检测（对手机号码格式不正确，邮件地址格式错误，年龄小于18岁进行检测）



检测结果如下



