GSQL语法练习题

1. 哪种累加器的声明用户必须提供自定义元组类型？

2. @attr1和@@attr1有什么区别？

3. 请给出accum与post-accum的区别？

4. 请解释以下代码的作用：

```
CREATE DIRECTED EDGE User_Recieve_Transaction (FROM User, TO Transaction)
WITH REVERSE_EDGE="User_Recieve_Transaction_Rev";
```

```
CREATE DISTRIBUTED QUERY C1 (STRING d_cardfile) FOR GRAPH unionpay_basic {
FILE f1(d_cardfile);
Start1 = {BC_DebitCard_Node.*};
S = SELECT x FROM Start1:x
  POST-ACCUM x.@cc_id = x.f_id;
L1 = SELECT s FROM Start1:s
    POST-ACCUM f1.println(s,s.@cc_id);
}
```

```
CREATE LOADING JOB load_reject FOR GRAPH sdmGraph {
    DEFINE FILENAME fn;
    LOAD fn
      TO VERTEX phone_phone VALUES (
        _, _,
        REDUCE(ignore_if_exists(gsql_to_uint($1))), _) WHERE $0== "1";
}
```

5. 指出下面代码块的错误，并改正：

```
CREATE QUERY subquery1 (VERTEX<person> m1) FOR GRAPH socialNet
RETURNS(BagAccum<VERTEX<post>>, BagAccum<VERTEX<person>>)
{Start = {m1};
 L1 = SELECT t
     FROM Start:s - (liked:e) - post:t;
 L2 = SELECT s FROM Start:s WHERE s.age>18;
 RETURN L1, L2;
}
```

```
PRINT vSet1, vSet2;
PRINT vSet1, @@accum2;
```

参考答案

1. heapAccum；

2. @attr1是局部变量，@@attr1是全局变量；

3. accum面向边集，post-accum面向点集，在accum之后计算；

4. ①创建从顶点User到顶点Transaction的有向边User_Recieve_Transaction，其反向边为 User_Recieve_Transaction_Rev；

   ②将顶点BC_DebitCard_Node及属性f_id写入文件d_cardfile；

   ③若顶点phone_phone第三个属性已存在值则保留，否则用文件fn中的第二列（筛选第一列==1的行）取其unit格式代替。

```
# query有且只能返回一个值
CREATE QUERY subquery1 (VERTEX<person> m1) FOR GRAPH socialNet
RETURNS(BagAccum<VERTEX<post>>)
{
 Start = {m1};
 L1 = SELECT t
      FROM Start:s – (liked:e) – post:t;
 L2 = SELECT s FROM Start:s WHERE s.age>18;
 RETURN L1;
}
```

```
PRINT vSet1, vSet2;
PRINT vSet1;
PRINT @@accum2;
```