

" "

IsFusion

```
, - , - .  
  
, . , .  
, : , , , , . , . , .
```

, .

```
1 MODULE  
Stock;
```

;,.

```
CLASS  
Stock '';  
  
name '' =  
3 DATA STRING  
4 [100]  
5 (Stock) IN  
6 base;  
address ''  
= DATA ST  
RING[150]  
(Stock) IN  
base;
```

, .

```
1 MODULE  
Item;
```

;,.

```
CLASS  
Item '';  
  
name '' =  
3 DATA S  
TRING[100]  
4 ](Item)  
5 IN base;  
6 barcode  
'' = DATA  
BPSTRING  
[13]  
(Item) IN  
base;
```

, .

```
salePrice
' ' = DATA
8 NUMERIC[17,
2](Item) IN
base;
```

```
1 MODULE
LegalEntity;
```

```
;
```

```
CLASS
LegalEntity ' ';
name ' ' = DATA
STRING[100]
3 (LegalEntity) IN
4 base;
5 address ' ' = DA
6 TA STRING[150]
7 (LegalEntity) IN
base;
inn ' ' = DATA B
PSTRING[9]
(LegalEntity) IN
base;
```

```
9 legalEntityINN = GROUP AG
GR LegalEntity
legalEntity BY inn
(legalEntity);
```

```
legalEntityINN , . : (innLegalEntity)
```

```
;
```

```
1 MODULE
Receipt;
```

```
Receipt .
```

```
3 REQUIRE Stock, Item,
LegalEntity;
```

```
, . , ( , ) . . .
```

```
5 CLASS Receipt '
';
6 CLASS
ReceiptDetail '
';
```

```
, . NONULL , . DELETE , Receipt, ReceiptDetail, , . , . , DELETE , .
```

```
receipt ' ' = DATA
8 Receipt (ReceiptDetail) N
  ONULL DELETE;
```

```
index ' '
  (ReceiptDetail d) =
10 PARTITION SUM
11 1 IF d IS
12 ReceiptDetail
  ORDER d BY
  receipt(d);
```

```
(id), . ORDER receiptDetail id,.. .
PARTITION BY, . (receipt(d)).
```

```
:, , , .
```

```
number ' ' = DATA BPSTRING[10]
  (Receipt);
14 date ' ' = DATA DATE (Receipt);
15
16 supplier ' ' = DATA LegalEntity
  (Receipt);
17 nameSupplier ' ' (Receipt r) =
18 name(supplier(r));
19
20
21 stock ' ' = DATA Stock (Receipt);
  nameStock ' ' (Receipt r) = name
  (stock(r));
```

```
: , , ( ).
```

```
item ' ' = DATA Item (ReceiptDetail);
nameItem ' ' (ReceiptDetail d) = name(item
23 (d));
24
25 quantity ' ' = DATA NUMERIC[16,4]
26 (ReceiptDetail);
27 price ' ' = DATA NUMERIC[17,2]
28 (ReceiptDetail);
  sum ' ' (ReceiptDetail d) = quantity(d) *
  price(d);
```

```
, , .
```

```
1 MODULE
  Shipment;
```

```
Shipment .
```

```
3 REQUIRE Stock, Item,
  LegalEntity;
```

```
, .
```

```

CLASS Shipment ' ';
CLASS ShipmentDetail ' ';
5 shipment ' ' = DATA
6 Shipment (ShipmentDetail) N
7 ONULL DELETE;
8 index ' ' (ShipmentDetail
9 d) =
10 PARTITION SUM 1 IF
11 d IS ShipmentDetail
ORDER d BY shipment
(d);

```

.,, , , .

```

number ' ' = DATA BPSTRING[10]
(Shipment);
13 date ' ' = DATA DATE (Shipment);
14
15 customer ' ' = DATA LegalEntity
16 (Shipment);
17 nameCustomer ' ' (Shipment s) =
18 name(customer(s));
19
20 stock ' ' = DATA Stock(Shipment);
nameStock ' ' (Shipment s) = name
(stock(s));

```

: , , ().

```

22 item ' ' = DATA Item (ShipmentDetail);
nameItem ' ' (ShipmentDetail d) = name(item
(d));
23
24 quantity ' ' = DATA NUMERIC[16,4]
25 (ShipmentDetail);
26 price ' ' = DATA NUMERIC[17,2]
27 (ShipmentDetail);
sum ' ' (ShipmentDetail d) = quantity(d) *
price(d);

```

, (salePrice). (WHEN CHANGED).

```

29 price(ShipmentDetail d) <- salePrice(item(d))
WHEN CHANGED(item(d));

```

.

.

```

1 MODULE
StockItem;

```

StockItem .

```
3 REQUIRE Shipment,  
Receipt;
```

```
receivedQuantity ' ' = GROUP SUM quantity(ReceiptDetail d) BY item(d),  
stock(receipt(d));  
5 shippedQuantity ' ' = GROUP SUM quantity(ShipmentDetail d) BY item(d),  
6 stock(shipment(d));  
7 currentBalance ' ' (Item i, Stock s) = receivedQuantity (i, s) (-)  
shippedQuantity (i, s);
```

```
9 CONSTRAINT currentBalance(Item i,  
Stock s) < 0 MESSAGE ' ';
```

Stock , , .

```
8 FORM stocks ''  
9 OBJECTS s  
= Stock  
10 PROPERTIES(  
11 s) name, address, N  
EW, DELETE  
;
```

Item , LegalEntity - .

```
10 FORM items ''  
11 OBJECTS i = Item  
12 PROPERTIES(i) name,  
13 barcode, salePrice, NEW, DELETE  
;
```

```
11 FORM legalEntities ''  
12 OBJECTS l =  
LegalEntity  
13 PROPERTIES(l)  
14 name, inn, address, NEW,  
DELETE  
;
```

. . : , /, - .

Receipt . , / (EDIT).

```

FORM receipt ' '
30     OBJECTS r = Receipt PANEL
31     PROPERTIES(r) number, date,
32     nameSupplier, nameStock
33
34     OBJECTS d = ReceiptDetail
35     PROPERTIES(d) index, nameItem,
36     quantity, price, sum READONLY, NEW, DELETE
37     GRID
38     FILTERS receipt(d) = r
39
40     EDIT Receipt OBJECT r
;

```

FILTERS receipt(d) == r. FILTERS , NULL. , , (receipt), . , /.

, , NEW , . , receipt .

Shipment . , / (EDIT).

```

FORM shipment ' '
31     OBJECTS s = Shipment PANEL
32     PROPERTIES(s) number, date,
33     nameCustomer, nameStock
34
35     OBJECTS d = ShipmentDetail
36     PROPERTIES(d) nameItem,
37     quantity, price, sum READONLY, NEW, DELETE
38     GRID
39     FILTERS shipment(d) = s
40
41     EDIT Shipment OBJECT s
;

```

- . .

. , . , . , . , (READONLY).

```

FORM receipts ' '
41     OBJECTS r = Receipt
42     PROPERTIES(r) READONLY
43     number, date, nameSupplier, nameStock
44     PROPERTIES(r) NEWSESSION NEW,
45     EDIT, DELETE
46
47     OBJECTS d = ReceiptDetail
48     PROPERTIES(d) READONLY index,
49     nameItem, quantity, price, sum
50     FILTERS receipt(d) = r
;

```

.

```

FORM shipments ' '
42     OBJECTS s = Shipment
43     PROPERTIES(s) READONLY
44     number, date, nameCustomer, nameStock
45     PROPERTIES(s) NEWSESSION NEW,
46     EDIT, DELETE
47
48     OBJECTS d = ShipmentDetail
49     PROPERTIES(d) READONLY
50     nameItem, quantity, price, sum
51     FILTERS shipment(d) = s
;

```

StockItem . , (-), . . (.. ,) .

```

11 FORM currentBalanceItemStock ' '
12     OBJECTS si = (s = Stock, i = Item)
13     PROPERTIES READONLY name(i), barcode(i), name
14     (s), currentBalance(i, s)
15     FILTERS currentBalance(i, s)
16 ;

```

OBJECTS si = (s = Stock, i = Item) si, Stock Item.

```

1 MODULE StockAccounting;
2 REQUIRE Stock, Item, LegalEntity, Receipt, Shipment,
3 StockItem;

```

StockAccounting . masterData, , . (root). (toolbar) root.

```

1 NAVIGATOR {
2     NEW FOLDER
3     masterData '' FIRST WINDOW
4     toolbar {
5         NEW items;
6         NEW stocks;
7         NEW
8     }
9     legalEntities;
10 }
11     NEW FOLDER documents
12     '' AFTER masterData WINDOW
13     toolbar {
14         NEW receipts;
15         NEW shipments;
16     }
17     NEW
18     currentBalanceItemStock A
19     AFTER documents;
20 }

```

(Github)

```

1 MODULE Stock;
2
3 CLASS Stock '';
4
5 name '' = DATA STRI
6 NG[100] (Stock) IN
7 base;
8 address '' = DATA S
9 TRING[150] (Stock)
10 IN base;
11
12 FORM stocks ''
13     OBJECTS s
14 = Stock
15     PROPERTIES(
16     s) name, address, N
17 EW, DELETE
18 ;

```

```

MODULE Item;
1 CLASS Item '';
2 name '' = DATA STRING[100]
3 (Item) IN base;
4 barcode '' = DATA BPSTRING[13]
5 (Item) IN base;
6
7 salePrice '' = DATA NUMERIC[17
8 ,2](Item) IN base;
9
10 FORM items ''
11     OBJECTS i = Item
12     PROPERTIES(i) name,
13 barcode, salePrice, NEW, DELETE
;

```

```

MODULE LegalEntity;
CLASS LegalEntity '';
1 name '' = DATA STRING[100]
2 ](LegalEntity) IN base;
3 address '' = DATA STRING[
4 150](LegalEntity) IN
5 base;
6 inn '' = DATA BPSTRING[9]
7 (LegalEntity) IN base;
8
9 legalEntityINN = GROUP AG
10 GR LegalEntity
11 legalEntity BY inn
12 (legalEntity);
13 FORM legalEntities ''
14     OBJECTS l =
LegalEntity
15     PROPERTIES(l)
name, inn, address, NEW,
DELETE
;

```



```

MODULE Receipt;

REQUIRE Stock, Item, LegalEntity;

CLASS Receipt ' ';
CLASS ReceiptDetail ' ';

1 receipt ' ' = DATA Receipt (ReceiptDetail) N
2 ONULL DELETE;
3
4 index ' ' (ReceiptDetail d) =
5     PARTITION SUM 1 IF d IS
6 ReceiptDetail
7     ORDER d BY receipt(d);
8
9 number ' ' = DATA BPSTRING[10] (Receipt);
10 date ' ' = DATA DATE (Receipt);
11
12 supplier ' ' = DATA LegalEntity (Receipt);
13 nameSupplier ' ' (Receipt r) = name(supplier
14 (r));
15
16 stock ' ' = DATA Stock (Receipt);
17 nameStock ' ' (Receipt r) = name(stock(r));
18
19 item ' ' = DATA Item (ReceiptDetail);
20 nameItem ' ' (ReceiptDetail d) = name(item
21 (d));
22
23 quantity ' ' = DATA NUMERIC[16,4]
24 (ReceiptDetail);
25 price ' ' = DATA NUMERIC[17,2]
26 (ReceiptDetail);
27 sum ' ' (ReceiptDetail d) = quantity(d) *
28 price(d);
29
30 FORM receipt ' '
31     OBJECTS r = Receipt PANEL
32     PROPERTIES(r) number, date,
33 nameSupplier, nameStock
34
35     OBJECTS d = ReceiptDetail
36     PROPERTIES(d) index, nameItem,
37 quantity, price, sum READONLY, NEW, DELETE G
38 RID
39     FILTERS receipt(d) = r
40
41     EDIT Receipt OBJECT r
42 ;
43
44 FORM receipts ' '
45     OBJECTS r = Receipt
46     PROPERTIES(r) READONLY number,
47 date, nameSupplier, nameStock
48     PROPERTIES(r) NEWSESSION NEW, EDIT,
49 DELETE
50
51     OBJECTS d = ReceiptDetail
52     PROPERTIES(d) READONLY index,
53 nameItem, quantity, price, sum
54     FILTERS receipt(d) = r
55 ;

```

```

MODULE Shipment;

REQUIRE Stock, Item, LegalEntity;

CLASS Shipment ' ';
CLASS ShipmentDetail ' ';

1 shipment ' ' = DATA Shipment (ShipmentDetail)
2 NONULL DELETE;
3 index ' ' (ShipmentDetail d) =
4     PARTITION SUM 1 IF d IS ShipmentDetail
5     ORDER d BY shipment(d);
6
7
8 number ' ' = DATA BPSTRING[10] (Shipment);
9 date ' ' = DATA DATE (Shipment);
10
11 customer ' ' = DATA LegalEntity (Shipment);
12 nameCustomer ' ' (Shipment s) = name(customer
13 (s));
14
15 stock ' ' = DATA Stock(Shipment);
16 nameStock ' ' (Shipment s) = name(stock(s));
17
18 item ' ' = DATA Item (ShipmentDetail);
19 nameItem ' ' (ShipmentDetail d) = name(item
20 (d));
21
22 quantity ' ' = DATA NUMERIC[16,4]
23 (ShipmentDetail);
24 price ' ' = DATA NUMERIC[17,2]
25 (ShipmentDetail);
26 sum ' ' (ShipmentDetail d) = quantity(d) *
27 price(d);
28
29 price(ShipmentDetail d) <- salePrice(item(d))
30 WHEN CHANGED(item(d));
31
32 FORM shipment ' '
33     OBJECTS s = Shipment PANEL
34     PROPERTIES(s) number, date,
35     nameCustomer, nameStock
36
37     OBJECTS d = ShipmentDetail
38     PROPERTIES(d) nameItem, quantity,
39     price, sum READONLY, NEW, DELETE GRID
40     FILTERS shipment(d) = s
41
42     EDIT Shipment OBJECT s
43 ;
44
45 FORM shipments ' '
46     OBJECTS s = Shipment
47     PROPERTIES(s) READONLY number, date,
48     nameCustomer, nameStock
49     PROPERTIES(s) NEWSESSION NEW, EDIT, DE
50 LETE
    OBJECTS d = ShipmentDetail
    PROPERTIES(d) READONLY nameItem,
    quantity, price, sum
    FILTERS shipment(d) = s
    ;

```

```

MODULE StockItem;

1 REQUIRE Shipment, Receipt;
2
3 receivedQuantity ' ' = GROUP SUM quantity(ReceiptDetail d) BY item(d),
4 stock(receipt(d));
5 shippedQuantity ' ' = GROUP SUM quantity(ShipmentDetail d) BY item(d),
6 stock(shipment(d));
7 currentBalance ' ' (Item i, Stock s) = receivedQuantity (i, s) (-)
8 shippedQuantity (i, s);
9
10 CONSTRAINT currentBalance(Item i, Stock s) < 0 MESSAGE '      ';
11
12 FORM currentBalanceItemStock ' '
13     OBJECTS si = (s = Stock, i = Item)
14     PROPERTIES READONLY name(i), barcode(i), name(s), currentBalance(i,
15 s)
16     FILTERS currentBalance(i, s)
17 ;

```

```

MODULE StockAccounting;

1
2 REQUIRE Stock, Item, LegalEntity, Receipt, Shipment,
3 StockItem;
4
5 NAVIGATOR {
6     NEW FOLDER masterData ' ' FIRST WINDOW toolbar {
7         NEW items;
8         NEW stocks;
9         NEW legalEntities;
10    }
11    NEW FOLDER documents ' ' AFTER masterData WINDOW
12 toolbar {
13        NEW receipts;
14        NEW shipments;
15    }
16    NEW currentBalanceItemStock AFTER documents;
17 }

```