

CS Games 2016



Dome Finances: Monetary Reform

Dome accounting Application - Currency

Summary

The new Dome monetary system, whose applicability in any commercial transaction is immediate, is built around common life objects, and defined as follows:

- Caps: 0-7, 8 caps are 1 Bottle;
- Bottle: 0-3, 4 bottles are 1 Keg;
- Keg: 0-63, 64 kegs are 1 Pack;
- Pack: 0-11, 12 packs are 1 Truck;
- Truck: 0-*, the new largest unit under the Dome legislation.

The formula to convert from old units (Domllars) to the new system is as follows:

```
class Domllar {
    int units;
    int cents;
}

class Domoney {
    int caps;
    int bottles;
    int kegs;
    int packs;
    int trucks;
}

class DomllarsConvert {
    public static Domoney convertFromDomllars(Domllar money)
    {
        int remc = money.cents * 100 + money.units;
        int trucks = remc / 24576;
        remc -= trucks * 24576;
        int packs = remc / 2048;
        remc -= packs * 2048;
        int keg = remc / 32;
        remc -= keg * 32;
        int bottles = remc / 8;
        remc -= bottles * 8;
        int caps = remc;
    }
}
```

```
        return new Domoney(caps, bottles, packs, kegs, trucks);  
    }  
}
```

Transactions

To ensure compatibility of the new monetary system, you must update the Transactions table. You will also need to provide an update script from the old table to the new one to ensure proper migration of the data.

Here is the new transaction table specification:

- transaction_id: PK_Integer
- transaction_type: FK_trans_types
- partner: FK_partners
- caps: Integer
- bottles: Integer
- kegs: Integer
- packs: Integer
- trucks: Integer
- date: String formatted as YYYY-MM-DD
- due_date: String formatted as YYYY-MM-DD
- comments: String
- paid: Boolean

i18n

The Dome being a multicultural entity, a good accounting application must support internationalization of its content.

The content of the Database remains out of the scope of the present document (this is however a long-term evolution which must not be discarded).

We demand each string within the application to be externalized and referenced programmatically within the application to ensure easy, proper translation by linguistic experts.