**Database Management IS610**

**Grocery Store E-coupon System**

**Part 3-update**

**Professor: Dr. Lina Zhou**

**Project Scope: Fall Semester, 2012**

**Team Name: JBVB DBA Team**

**Team Member: Jing Bai, Vikas Bansal**

**Product**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| ProductID | ProductName | Brand | Size | UnitOfMeasurement | ProductCategoryID | Price |

**Reference integrity:**

Foreign key (ProductCategoryID) references ProductCategory

**Functional dependency:**

ProductID -> ProductName, Brand, Size, UnitOfMeasurement, ProductCategoryID, Price

**Offer**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| |  | | --- | | ProductID | | |  | | --- | | StoreID | | FromDate |

**Reference integrity:**

Foreign key (ProductID) references Product

Foreign key (StoreID) references Store

**Functional dependency:**

ProductID, StoreID -> FromDate

**Store**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| StoreID | Street | City | State | ZipCode |

**Functional dependency:**

StoreID -> Street, City, State, ZipCode

**ProductCategory**

|  |  |
| --- | --- |
| ProductCategoryID | ProductCategoryName |

**Functional dependency:**

ProductCategory -> ProductCategoryName

**Coupon**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| CouponID | ProductCategoryID | CouponType | StartDate | ExpireDate |

**Reference integrity:**

Foreign key (ProductCategoryID) references ProductCategory

**Functional dependency:**

CouponID -> CouponType, StartDate, ExpireDate, ProductCategoryID

**PERCENT\_DISCOUNT\_COUPON**

|  |  |  |
| --- | --- | --- |
| |  | | --- | | **CouponID** | | PercentageOff |

**Reference integrity:**

Foreign Key (CouponID) references Coupon

**Functional dependency:**

CouponID -> PercentageOff

**DOLLAR\_DISCOUNT\_COUPON**

|  |  |  |
| --- | --- | --- |
| |  | | --- | | **CouponID** | | DollarOff |

**Reference integrity:**

Foreign Key (CouponID) references Coupon

**Functional dependency:**

CouponID -> DollarOff

**VALIDATE**

|  |  |  |  |
| --- | --- | --- | --- |
| ValidationID | ValidationDate | CouponID | StoreID |

**Reference integrity:**

Foreign Key (CouponID) references Coupon

Foreign Key (StoreID) references Store

**Functional dependency:**

ValidateID -> ValidateDate, CouponID, StoreID

**Load**

|  |  |  |  |
| --- | --- | --- | --- |
| LoadID | CouponID | LoadDate | UserID |

**Reference integrity:**

Foreign Key (CouponID) references Coupon

Foreign Key (UserID) references User

**Functional dependency:**

LoadID -> CouponID, LoadDate, UserID

**User**

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| UserID | User  Name | Pass  word | Last  Name | Middle  Initial | First  Name | Street | City | State | ZipCode | Email | Phone | DateOf  Birth | Member  CardID | Coupon  Amount  limited | Annual  Spent |

**Functional dependency:**

UserID -> Username, Password, LastName, FirstName, Street, City, State, ZipCode, Email, Phone, DateOfBirth, MemberCardID, CouponAmountLimited, AnnualSpent

**GOLDEN\_USER**

|  |  |  |
| --- | --- | --- |
| |  | | --- | | UserID | | DiscountRate |

**Reference integrity:**

Foreign key (UserID) references User

**Functional dependency:**

UserID -> DiscountRate