TALLINN UNIVERSITY OF TECHNOLOGY

TOY SWAP APPLICATION

Building Distributed Systems

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Introduction

The Toy Swap Application is a platform that enables parents to connect with one another to exchange toys for their children. Through application, parents can easily list their child's old toys that are no longer in use or have been outgrown, and find other parents who have toys that their child might be interested in. By swapping toys, parents can reduce waste, save money, and contribute to a more sustainable future.

Overview

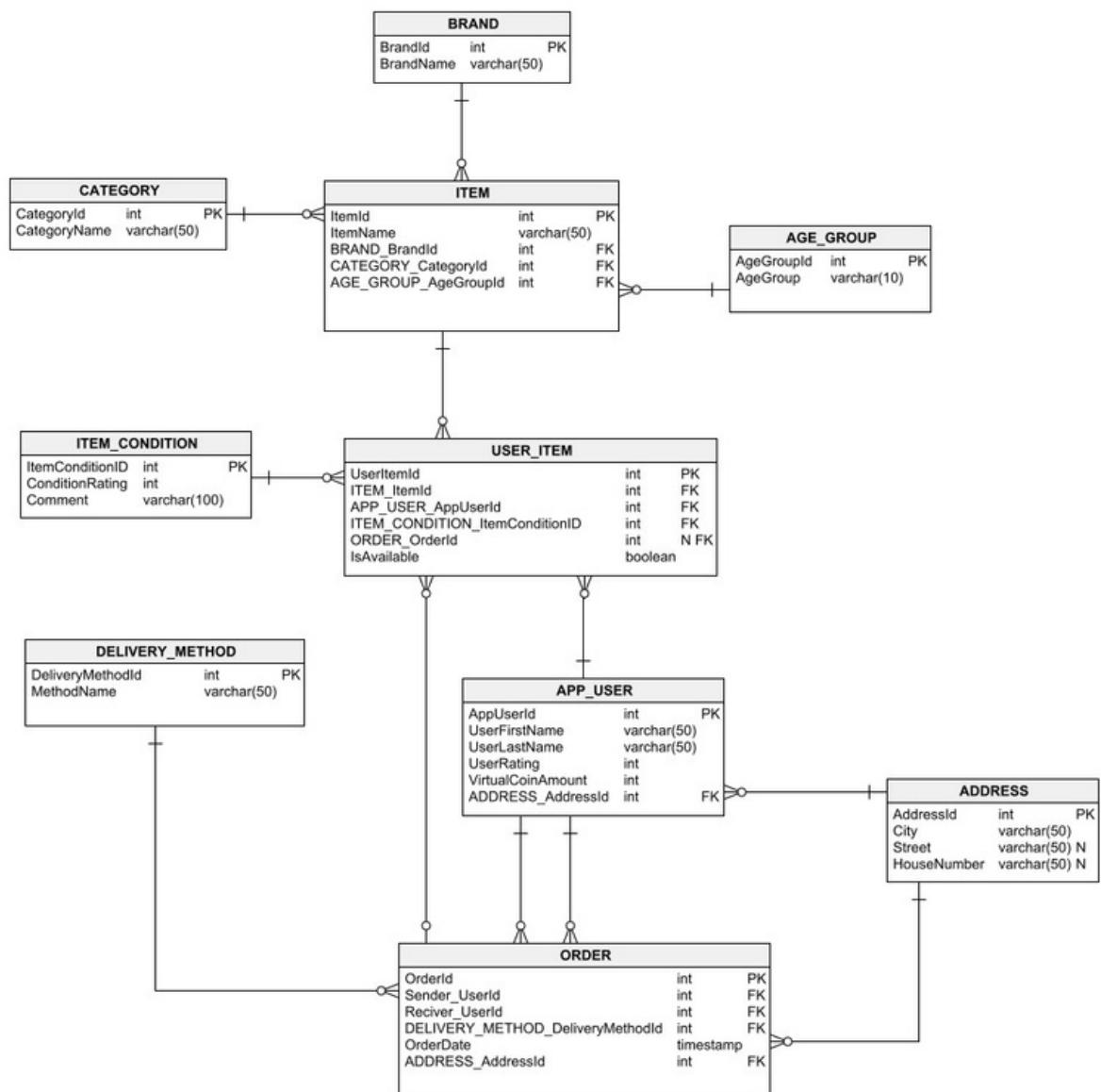This application is similar to book swap application, but there are some differences.

Each user can post item and set price from 0 to 10. Zero means that users can give them for free also. Virtual points are given to a user when a successful exchange is completed. Also new users get 5 points. Items condition also must be rated when posting it.

Users can rate other users who they have exchanged toys with. Average rating of all users is displayed in public, so it will alert others which users to not trust or otherwise. Rating is from 1 to 5. Next to rating user's hometown is displayed also.

Delivery system is not part of this application. Users can choose delivery method when completing order. Like hand-to-hand or using parcel machines. Then the user, who's item has been selected, has to post it and receiver pays for the delivery.

Items are sorted by category(boardgames, wooden toys), age groups and by brands. Filters can be applied. Search box is for searching item by it's name.

ERD

BRAND

BrandId	int	PK
BrandName	varchar(50)	

CATEGORY

CategoryId	int	PK
CategoryName	varchar(50)	

ITEM

ItemId	int	PK
ItemName	varchar(50)	
BRAND_BrandId	int	FK
CATEGORY_CategoryId	int	FK
AGE_GROUP_AgeGroupId	int	FK

AGE_GROUP

AgeGroupId	int	PK
AgeGroup	varchar(10)	

ITEM_CONDITION

ItemConditionID	int	PK
ConditionRating	int	
Comment	varchar(100)	

USER_ITEM

UserItemId	int	PK
ITEM_ItemId	int	FK
APP_USER_AppUserId	int	FK
ITEM_CONDITION_ItemConditionID	int	FK
ORDER_OrderId	int	N FK
IsAvailable	boolean	

DELIVERY_METHOD

DeliveryMethodId	int	PK
MethodName	varchar(50)	

APP_USER

AppUserId	int	PK
UserFirstName	varchar(50)	
UserLastName	varchar(50)	
UserRating	int	
VirtualCoinAmount	int	
ADDRESS_AddressId	int	FK

ADDRESS

AddressId	int	PK
City	varchar(50)	
Street	varchar(50) N	
HouseNumber	varchar(50) N	

ORDER

OrderId	int	PK
Sender_UserId	int	FK
Reciver_UserId	int	FK
DELIVERY_METHOD_DeliveryMethodId	int	FK
OrderDate	timestamp	
ADDRESS_AddressId	int	FK

Vertabelo

Toy swap

By Location ▼ By Age ▼ By Group ▼ By Brand ▼   Login

Here are random toys displayed

Toyname
Brand

Toyname
Brand

Toyname
Brand

Toyname
Brand

Toyname
Brand

Toyname
Brand

About   *Rules*

Toy swap

Search toys...

By Location ▼ **By Age** ▼ **By Group** ▼ By Brand ▼

Login

Toy Type

Action Figures (29)

Blasters (3)

Building Blocks (67)

Electronic Pets (5)

Fidget Toys (1)

Show more

Other Options

☐ Savings (140)

☐ New Product (118)

Age

☐ 0 - 18 months (1)

☐ 18 - 36 months (1)

☐ 3 - 5 years (111)

☐ 5 - 8 years (474)

☐ 8 - 11 years (270)

When moved over triangles, dropdown list of Brands/Groups/ages/ Locations

Toy swap

Your ordering "itemName". Cost that many points

enter address...

method of delivery selectlist...

if package station, then enter which one

Submit

Toy swap

Item name
Brand
Age Group

This toy is offered by:

	Username user rating	Item price Item Condition rating	City name	Comment about item by user who posted	Order
👤	Username user rating	Item price Item Condition rating	◉ City name	Comment about item by user who posted	Order
👤	Username user rating	Item price Item Condition rating	◉ City name	Comment about item by user who posted	Order