HANOI UNIVERSITY OF SCIENCE AND TECHNOLOGY

School of Information and Communications Technology

Software Requirement Specification

Version 1.1

An Internet Media Store

Capstone Project

Subject: Software Design and Construction

Group 21

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# **.Data Modeling**

## ***Er Diagram***

Ảnh có chứa hình vẽ, bản phác thảo, biểu đồ, Nghệ thuật vẽ nét đơn

Mô tả được tạo tự động

## ***Database Design***

### Logical Data Model

Ảnh có chứa văn bản, biểu đồ, Song song, Kế hoạch

Mô tả được tạo tự động

### SQL

CREATE TABLE "aims"."Media"(

"id" INTEGER PRIMARY KEY AUTOINCREMENT NOT NULL,

"category" VARCHAR(50) NOT NULL,

“categoryID” INTERGER NOT NULL,

"price" INTEGER NOT NULL,

"quantity" INTEGER NOT NULL,

"title" VARCHAR(50) NOT NULL,

"value" INTEGER NOT NULL,

"imageUrl" VARCHAR(50) NOT NULL

);

CREATE TABLE "aims"."CD"(

"id" INTEGER PRIMARY KEY NOT NULL,

"artist" VARCHAR(50) NOT NULL,

"recordLabel" VARCHAR(50) NOT NULL,

"musicType" VARCHAR(50) NOT NULL,

"releasedDate" DATE,

“mediaID” INTEGER NOT NULL,

CONSTRAINT "fk\_CD\_Media1"

FOREIGN KEY("mediaID")

REFERENCES "Media"("id")

);

CREATE TABLE "aims"."LD"(

"id" INTEGER PRIMARY KEY NOT NULL,

"artist" VARCHAR(50) NOT NULL,

"recordLabel" VARCHAR(50) NOT NULL,

"musicType" VARCHAR(50) NOT NULL,

"releasedDate" DATE,

“mediaID” INTEGER NOT NULL,

CONSTRAINT "fk\_CD\_Media1"

FOREIGN KEY("mediaID")

REFERENCES "Media"("id")

);

CREATE TABLE "aims"."DVD"(

"id" INTEGER PRIMARY KEY NOT NULL,

"discType" VARCHAR(45) NOT NULL,

"director" VARCHAR(45) NOT NULL,

"runtime" INTEGER NOT NULL,

"studio" VARCHAR(45) NOT NULL,

"subtitle" VARCHAR(45) NOT NULL,

"releasedDate" DATETIME,

“mediaID” INTEGER NOT NULL,

CONSTRAINT "fk\_DVD\_Media1"

FOREIGN KEY("mediaID")

REFERENCES "Media"("id")

);

CREATE TABLE "aims"."Book"(

"id" INTEGER PRIMARY KEY NOT NULL,

"author" VARCHAR(50) NOT NULL,

"coverType" VARCHAR(50) NOT NULL,

"publisher" VARCHAR(50) NOT NULL,

"publishDate" DATETIME NOT NULL,

"numOfPages" INTEGER NOT NULL,

"language" VARCHAR(50) NOT NULL,

"bookCategory" VARCHAR(50) NOT NULL,

“mediaID” INTEGER NOT NULL,

CONSTRAINT "fk\_Book\_Media1"

FOREIGN KEY("mediaID")

REFERENCES "Media"("id")

);

CREATE TABLE "aims"."DeleveryInfo"(

"id" INTEGER PRIMARY KEY AUTOINCREMENT NOT NULL,

"name" VARCHAR(50),

"address" VARCHAR(50),

"phoneNumber" INTEGER NOT NULL,

);

CREATE TABLE "aims"."Card"(

"id" INTEGER PRIMARY KEY AUTOINCREMENT NOT NULL,

"cardCode” INTEGER NOT NULL,

"owner" VARCHAR(50) NOT NULL,

"cvv" VARCHAR(3) NOT NULL,

"dateExpired" VARCHAR(4) NOT NULL

);

CREATE TABLE "aims"."Order"(

"id" INTEGER NOT NULL,

"shippingFee" VARCHAR(50),

"typeShipping" VARCHAR(50),

"deleveryID" INTEGER NOT NULL,

PRIMARY KEY("id","deleveryID"),

CONSTRAINT "fk\_Order\_DeleveryInfo1"

FOREIGN KEY("deleveryID")

REFERENCES "DeleveryInfo"("id")

);

CREATE TABLE "aims"."OrderMedia"(

"orderID" INTEGER NOT NULL,

"price" INTEGER NOT NULL,

"quantity" INTEGER NOT NULL,

"mediaID" INTEGER NOT NULL,

PRIMARY KEY("orderID","mediaID"),

CONSTRAINT "fk\_ordermedia\_order"

FOREIGN KEY("orderID")

REFERENCES "Order"("id"),

CONSTRAINT "fk\_OrderMedia\_Media1"

FOREIGN KEY("mediaID")

REFERENCES "Media"("id")

);

CREATE INDEX "aims"."OrderMedia.fk\_ordermedia\_order\_idx" ON "OrderMedia"

("orderID");

CREATE INDEX "aims"."OrderMedia.fk\_OrderMedia\_Media1\_idx" ON "OrderMedia"

("mediaID");

CREATE TABLE "aims"."Invoice"(

"id" INTEGER PRIMARY KEY NOT NULL,

"totalAmount" INTEGER NOT NULL,

"orderID" INTEGER NOT NULL,

CONSTRAINT "fk\_Invoice\_Order1"

FOREIGN KEY("orderID")

REFERENCES "Order"("id")

);

CREATE INDEX "aims"."Invoice.fk\_Invoice\_Order1\_idx" ON "Invoice"

("orderID");

CREATE TABLE "aims"."PaymentTransaction"(

"id" INTEGER NOT NULL,

"createDatet" DATETIME NOT NULL,

"content" VARCHAR(45) NOT NULL,

"method" VARCHAR(45),

"cardID" INTEGER NOT NULL,

"invoiceID" INTEGER NOT NULL,

PRIMARY KEY("id","cardId","invoiceID"),

CONSTRAINT "fk\_PaymentTransaction\_Card1"

FOREIGN KEY("cardID")

REFERENCES "Card"("id"),

CONSTRAINT "fk\_PaymentTransaction\_Invoice1"

FOREIGN KEY("invoiceID")

REFERENCES "Invoice"("id")

);

CREATE INDEX "aims"."PaymentTransaction.fk\_PaymentTransaction\_Card1\_idx" ON

"PaymentTransaction" ("cardID");

CREATE INDEX "aims"."PaymentTransaction.fk\_PaymentTransaction\_Invoice1\_idx"

ON "PaymentTransaction" ("invoiceID");