University of British Columbia, Department of Computer Science

CPSC 304

Cover Page for Project Logical Design

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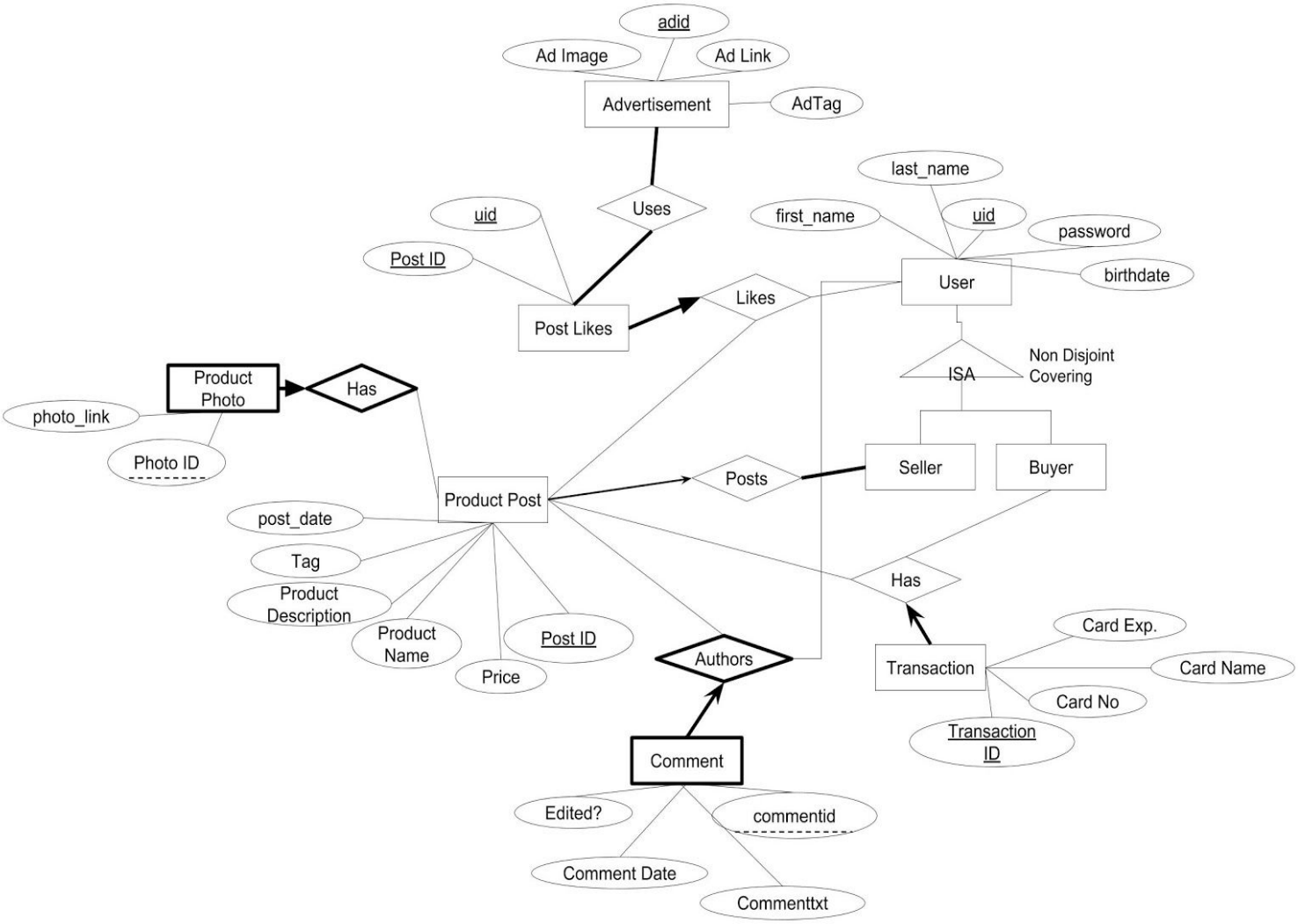
By typing our names and student numbers in the above table, we certify that the work in the attached assignment was performed solely by those whose names and student IDs are included above.
In addition, we indicate that we are fully aware of the rules and consequences of plagiarism, as set forth by the Department of Computer Science and the University of British Columbia

MarketDB

Entity Relationship Diagram



MarketDB Entity Relationship Diagram

Tables:

Advertisement[adid: Int(8), AdImage: Varchar(500), AdLink: Varchar(500), AdTag: Varchar(20)]

Primary Key: adid

FDs: adid → AdImage, AdLink, AdTag

Post_Likes(likes-uid: Varchar(30), likes-postid: Int, **uid**: Varchar(30), **postid**: Int)

Primary Key: likes-uid, likes_postid

Foreign Key: uid references User, postid references Post

FDs: likes_uid, likes-postid → uid, postid

User(uid: Varchar(30), first_name: Varchar(20), last_name: Varchar(20), Password:Varchar(30), BirthDate: Date)

Primary key: uid

FDs: uid → first_name, last_name, Password, BirthDate

Seller(**uid**: Varchar(30), first_name: Varchar(20), last_name: Varchar(20), Password: Varchar(30), BirthDate: Date)

Primary Key: uid

Foreign Key: uid references parent class, User

FDs: uid → first_name, last_name, Password, BirthDate

Buyer(**uid**: Varchar(30), first_name: Varchar(20), last_name: Varchar(20), Password: Varchar(30), BirthDate: Date)

Primary Key: uid

Foreign Key: uid references parent class, User

*b/c our ISA is non-disjoint, covering, and Buyer has relationship need 3 new tables

FDs: uid → first_name, last_name, Password, BirthDate

Transaction_Has(transactionid: Int, Card Exp: Char(4), Card No: Char(12), Card Name: Varchar(50), **postid**: Int, **uid**: Varchar(30))

Primary key: transactionid

Foreign Key: postid references Product_Post, uid references Buyer

FDs: transactionid → Card_Exp, Card_No, Card_Name, postid, uid

Comment(commentid: Int, **postid**: Int, **uid**: Varchar(30), Commenttxt: String, CommentDate: Date, Edited?: Boolean)

Primary Key: commentid, postid, uid

Foreign Key: postid references Post, uid references User

FDs: commentid, postid, uid → Commenttxt, CommentDate, Edited?

Product_Posts(postid: Int, **uid:** Varchar(30), Product_Description: String, Product_Name: String, Price: Integer, Tags: String)

Primary Key: postid

Foreign Key: uid references Seller

FDs: postid → uid, Product_Description, Product_Name, Price, Tags

Product_Photo(photoid: Int, **postid**: Int, photo_link: varchar(500))

Primary Key: photoid, postid

Foreign Key: postid references Post

FDs: photoid, postid → photo_link

Uses(**postid**: Int**, uid**: Varchar(30), **adid**: Int)

Primary Key: postid, uid, adid

Foreign Key: postid references Post, uid references User, adid references Advertisment

Don't need: ProductPhoto_Has(), Posts(), Likes(), Authors(), Transaction_Has()

Our table is normalized to BCNF because every FD where X → b, has an X that is a superkey of that relationship.