Photography Database

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Executive Summary

This database is designed to store information about cameras, lenses, memory cards, printers, printer paper, and printer ink. It will include information such as brands, models, sizes, lengths, retail prices, etc. Users could use this database to find out what cameras and lenses work together, which printers and paper work together, and which printers and ink work together. Users could also use the database to find the cost of these items either separately or together. Every time a new camera, lens, printer, etc is released it can be added to the database with all of its identifiers. This document will include not only the database, but also specific views, procedures, and triggers that will help the user find important information.

ER Diagram

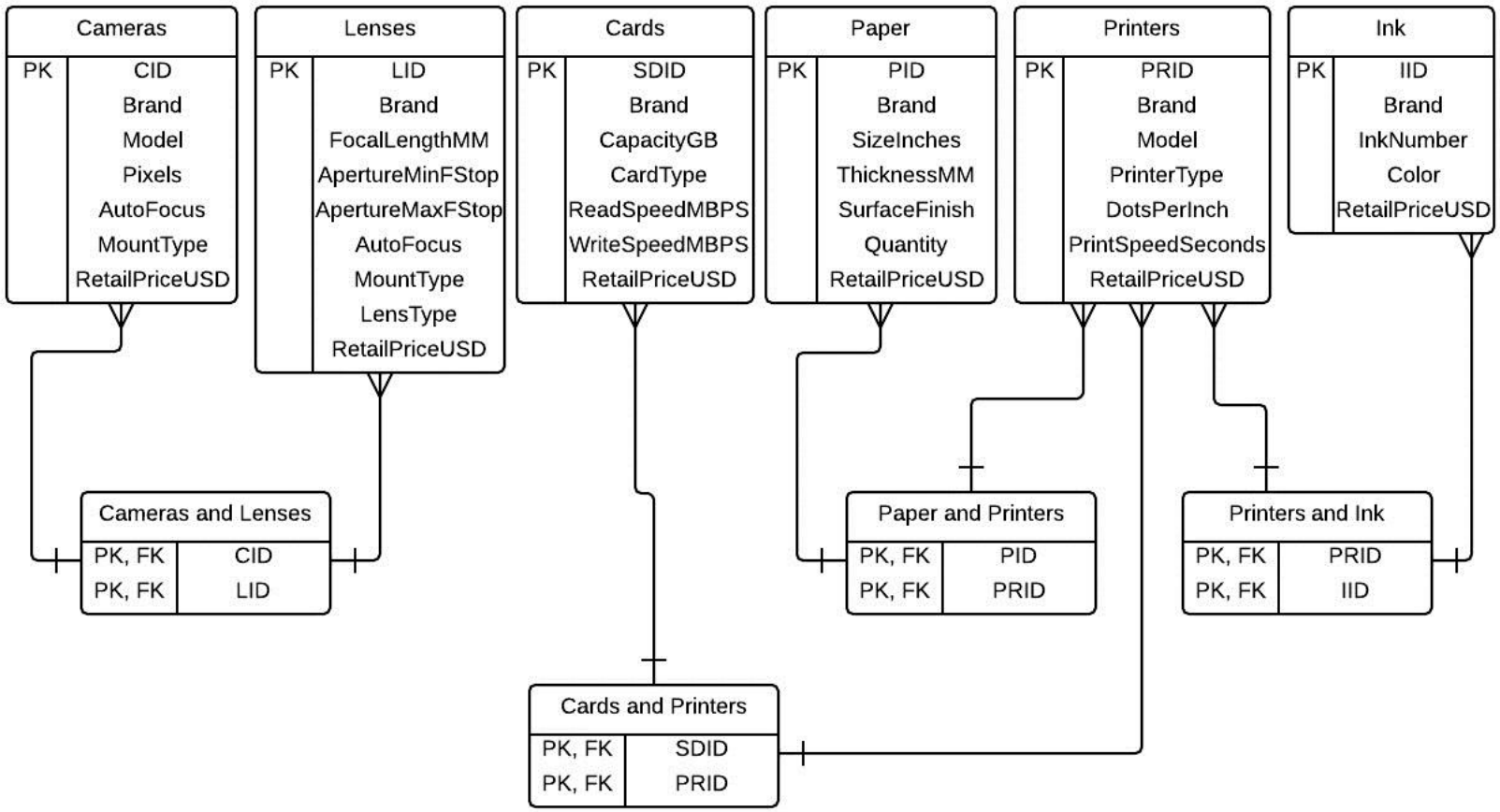
Cameras
PK
CID
Brand
Model
Pixels
AutoFocus
MountType
RetailPriceUSD
Lenses
PK
LID
Brand
FocalLengthMM
ApertureMinFStop
ApertureMaxFStop
AutoFocus
MountType
LensType
RetailPriceUSD
Cards
PK
SDID
Brand
CapacityGB
CardType
ReadSpeedMBPS
WriteSpeedMBPS
RetailPriceUSD
Paper
PK
PID
Brand
SizeInches
ThicknessMM
SurfaceFinish
Quantity
RetailPriceUSD
Printers
PK
PRID
Brand
Model
PrinterType
DotsPerInch
PrintSpeedSeconds
RetailPriceUSD
Ink
PK
IID
Brand
InkNumber
Color
RetailPriceUSD
Cameras and Lenses
PK, FK
CID
PK, FK
LID
Paper and Printers
PK, FK
PID
PK, FK
PRID
Printers and Ink
PK, FK
PRID
PK, FK
IID
Cards and Printers
PK, FK
SDID
PK, FK
PRID

Table Create Statements

Cameras Table

The Cameras Table stores information about different camera brands and models. It has six unique fields, including brand, model, pixels, autofocus, mountType, and retailPriceUSD.

Functional Dependencies

CID → brand, model, pixels, autofocus, mountType, retailPriceUSD

SQL Create Statement

```
DROP TABLE IF EXISTS cameras;
CREATE TABLE cameras (
CID         varchar(14) not null,
brand       text,
model       text,
pixels      numeric (3,1),
autofocus   varchar(3),
mountType   text,
retailPriceUSD     money,
primary key (CID)
);
```

Cameras Table Sample Data

cid character varying(14)	brand text	model text	pixels numeric(3,1)	autofocus character varying(3)	mounttype text	retailpriceusd money
25478	Nikon	D5100	16.9	Yes	Nikon F	$646.95
8035B002	Canon	EOS 6D	20.6	Yes	Canon EF	$1,899.00
5260B002	Canon	EOS 5D Mark III	23.4	Yes	Canon EF	$3,399.00
8469B002	Canon	EOS 70D	20.9	Yes	Canon EF	$1,099.00
1540	Nikon	D610	24.7	Yes	Nikon F	$1,996.95
1513	Nikon	D7100	24.7	Yes	Nikon F	$1,146.95
25480	Nikon	D800	36.8	Yes	Nikon F	$2,796.95
25492	Nikon	D3200	24.7	Yes	Nikon F	$496.95
5169B003	Canon	EOS Rebel T3i	18.7	Yes	Canon EF	$569.00
4460B003	Canon	60D	19.0	Yes	Canon EF	$699.00
ILCE7R	Sony	Alpha a7R	36.8	Yes	Sony E-Mount	$2,298.00
25498	Nikon	D800E	36.8	Yes	Nikon F	$2,996.95
8035B009	Canon	EOS 6D	20.6	Yes	Canon EF	$2,499.00
15530	Pentax	K-3	24.7	Yes	Pentax K	$1,296.95
V207010BU000	Olympus	OM-D E-M1	16.8	Yes	Pentax K	$1,399.00
25474	Nikon	D7000	16.9	Yes	Nikon F	$996.95
1525	Nikon	Df	16.6	Yes	Nikon F	$2,746.95
8575B003	Canon	EOS Rebel SL1	18.5	Yes	Canon EF	$699.00
8595B005	Canon	EOS Rebel T5i	18.5	Yes	Canon EF	$999.00
EV-NX300ZBAVUS	Samsung	NX300	21.6	Yes	Samsung NX	$568.59
ILCE7	Sony	Alpha a7	24.7	Yes	Sony E-Mount	$1,698.00
NEX6L	Sony	Alpha NEX-6	16.7	Yes	Sony E-Mount	$798.00
16404935	Fujifilm	X-E2	16.7	Yes	Fujifilm X Mount	$1,399.00
5253B002	Canon	EOS-1D X	19.3	Yes	Canon EF	$6,799.00

Lenses Table

The lenses table stores information about different lens brands and models. It has eight unique fields including brand, focalLengthMM, apertureMinFStop, apertureMaxFStop, autofocus, mountType, lensType, and retailPriceUSD.

Functional Dependencies

LID → brand, focalLengthMM, apertureMinFSTop, apertureMaxFStop, autofocus, mountType, lensType, retailPriceUSD

SQL Create Statement

```
DROP TABLE IF EXISTS lenses;
CREATE TABLE lenses (
LID             varchar(14) not null,
brand           text,
focalLengthMM varchar(9),
apertureMinFStop    numeric (3,1),
apertureMaxFStop  numeric (2,1),
autofocus       varchar(3),
mountType       text,
lensType        text,
retailPriceUSD    money,
primary key (LID)
);
```

Lenses Table Sample Data

lid character varying(14)	brand text	focallengthmm character varying(9)	aperturemaxfstop numeric(3,1)	aperturemaxfstop numeric(2,1)	autofocus character varying(3)	mounttype text	lenstype text	retailpriceusd money
2751B002	Canon	70-200	32.0	2.8	Yes	Canon EF	Telephoto	$2,499.00
2515A003	Canon	50	22.0	1.4	Yes	Canon EF	Standard	$399.99
2519A003	Canon	85	22.0	1.8	Yes	Canon EF	Standard	$419.00
5175B002	Canon	24-70	22.0	2.8	Yes	Canon EF	Standard	$2,299.00
2199	Nikon	50	16.0	1.8	Yes	Nikon F	Normal	$216.95
6310B002	Canon	40	22.0	2.8	Yes	Canon EF	Standard	$149.00
0345B002	Canon	70-300	45.0	5.6	Yes	Canon EF	Telephoto	$649.99
2213	Nikon	18-140	38.0	5.6	Yes	Nikon F	Multi-Purpose	$596.95
6097B002	Canon	18-135	36.0	5.6	Yes	Canon EF	Wide-Angel	$549.00

Cards Table

The Cards table stores information about SD Card brands and sizes. It has six unique fields including brand, capacityGB, cardType, readSpeedMBPS, writeSpeedMBPS, and retailPriceUSD.

Functional Dependencies

SDID → brand, capacityGB, cardType, readSpeedMBPS, writeSpeedMBPS, retailPriceUSD

SQL Create Statement

```
DROP TABLE IF EXISTS cards;
CREATE TABLE cards (
SDID            varchar(14) not null,
brand           text,
capacityGB      int,
cardType        text,
readSpeedMBPS   int,
writeSpeedMBPS  int,
retailPriceUSD    money,
primary key (SDID)
);
```

Cards Table Sample Data

sdid character varying(14)	brand text	capacitygb integer	cardtype text	readspeedmbps integer	writespeedmbps integer	retailpriceusd money
SDSDU016GU46	SanDisk	32	SDHC	30	30	$19.49
SDSDRX3016GA21	SanDisk	16	SDHC	45	45	$16.95
SDSDU064GA46	SanDisk	64	SDXC	30	30	$34.95
SDSDXS008GA46	SanDisk	64	SDHC	80	30	$19.89
TS8GSDHC10	Transcend	8	SDHC	30	30	$8.95
TS32GSDHC10	Transcend	32	SDHC	30	30	$22.95
SF32UYTQMN	Sony	32	SDHC	40	40	$26.50
EYEFI16PC	Eye-Fi	16	SDHC	22	22	$59.95
LSD16GCTBNA600	Lexar	16	SDHC	90	45	$29.95

Printers Table

The Printers table stores information about different printer brands and models. It has six unique fields including brand, capacityGB, cardType, readSpeedMBPS, writeSpeedMBPS, and retailPriceUSD.

Functional Dependencies

PRID → brand, model, printerType, dotsPerInch, printSpeedSeconds, retailPriceUSD

SQL Create Statements

```
DROP TABLE IF EXISTS printers;
CREATE TABLE printers (
PRID              varchar(14) not null,
brand             text,
model             text,
printerType       text,
dotsPerInch       text,
printSpeedSeconds int,
retailPriceUSD    money,
primary key (PRID)
);
```

Printers Table Sample Data

prid character varying(14)	brand text	model text	printertype text	dotsperinch text	printspeedseconds integer	retailpriceusd money
6228B002	Canon	Pixma Pro-100	Inkjet	4800 x 2400	51	$409.00
C11CA16201	Epson	Stylus R2880	Inkjet	5760 x 1440	58	$599.99
CM749AB1H	HP	Officejet Pro 8600	Inkjet	4800 x 1200	14	$129.00
C11CA86201	Epson	Stylus R3000	Inkjet	5760 x 1440	93	$799.00
C11CB35201	Epson	Stylus R2000	Inkjet	5760 x 1440	68	$599.00
6992B002	Canon	Pixma MX922	Inkjet	9600 x 2400	68	$129.99
C11CB53201	Epson	Artisan 1430	Inkjet	5760 x 1440	46	$299.99
CZ045AB1H	HP	Photosmart 7520	Inkjet	4800 x 1200	33	$149.99

Paper Table

The Paper table stores information about different paper brands and sizes. It has six unique fields including brand, sizeInches, thicknessMM, surfaceFinish, quantity, and retailPriceUSD.

Functional Dependencies

PID → brand, sizeInches, thicknessMM, surfaceFinish, quantity, retailPriceUSD

SQL Create Statements

```
DROP TABLE IF EXISTS paper;
CREATE TABLE paper (
PID                 varchar(14) not null,
brand               text,
sizeInches          text,
thicknessMM         int,
surfaceFinish       text,
quantity            int,
retailPriceUSD      money,
primary key (PID)
);
```

Paper Table Sample Data

pid character varying(14)	brand text	sizeinches text	thicknessmm integer	surfacefinish text	quantity integer	retailpriceusd money
S041405	Epson	8.5x11	10	Luster	50	$24.29
S042084	Epson	17x22	10	Luster	25	$45.00
S045234	Epson	8.5x11	10	Matte	14	$24.95
2311B024	Canon	5x7	11	Glossy	20	$3.99
2311B001	Canon	8.5x11	11	Glossy	20	$4.99
Q6638A	HP	4x6	9	Glossy	100	$10.99
Q7854A	HP	8.5x11	11	Glossy	100	$22.99
CR669A	HP	5x7	12	Glossy	100	$13.95

Ink Table

The Ink table stores information about different ink brands, numbers, and colors. It has four unique fields including brand, inkNumber, and retailPriceUSD.

Functional Dependencies

IID → brand, inkNumber, color, retailPriceUSD

SQL Create Statements

```
DROP TABLE IF EXISTS ink;
CREATE TABLE ink (
IID                 varchar(14) not null,
brand               text,
inkNumber           text,
color               text,
retailPriceUSD      money,
primary key (IID)
);
```

Ink Table Sample Data

iid character varying(14)	brand text	inknumber text	color text	retailpriceusd money
T580700	Epson	T5807	Light Black	$47.99
T580100	Epson	T5801	Photo Black	$59.95
T580400	Epson	T5804	Yellow	$50.19
T580500	Epson	T5805	Cyan	$50.19
T580B00	Epson	T580B	Magenta	$51.74
0625B002	Canon	CLI-8	Magenta	$13.24
0623B002	Canon	CLI-8	Yellow	$12.79
0620B002	Canon	CLI-8	Black	$12.48
0621B002	Canon	CLI-8	Cyan	$12.39
CB320WN	HP	564	Yellow	$9.99
CB316WN	HP	564	Black	$11.19
CB318WN	HP	564	Cyan	$8.99
CB319WN	HP	564	Magenta	$10.77
CB317WN	HP	564	Photo Black	$8.99

Views

Prices of Nikon Cameras

```
Create View Current_Prices_of_Nikon_Cameras AS
Select Distinct c.model as "Nikon Model",c.retailPriceUSD as "Cost of Camera
in USD"
    from cameras c
    where c.brand = 'Nikon'

Select * from Current_Prices_of_Nikon_Cameras;
```

Sample Data

Nikon Model text	Cost of Camera in USD money
D3200	$496.95
D5100	$646.95
D610	$1,996.95
D7000	$996.95
D7100	$1,146.95
D800	$2,796.95
D800E	$2,996.95
Df	$2,746.95

Prices of Canon Cameras

```
Create View Current_Prices_of_Canon_Cameras AS
Select Distinct c.model as "Canon Model",c.retailPriceUSD as "Cost of Camera
in USD"
    from cameras c
    where c.brand = 'Canon'

Select * from Current_Prices_of_Canon_Cameras;
```

Sample Data

Canon Model text	Cost of Camera in USD money
60D	$699.00
EOS-1D X	$6,799.00
EOS 5D Mark III	$3,399.00
EOS 6D	$1,899.00
EOS 6D	$2,499.00
EOS 70D	$1,099.00
EOS Rebel SL1	$699.00
EOS Rebel T3i	$569.00
EOS Rebel T5i	$999.00

Prices of Nikon Cameras and Lenses Together

```
Create View Cost_of_Nikon_Cameras_and_Lenses AS
Select Distinct c.model as "Camera Model", l.focalLengthMM as "Lens Focal
Length", c.retailPriceUSD + l.retailPriceUSD as "Cost of Camera and Lens"
    from cameras c, lenses l
    where c.mountType = l.mountType
      and c.brand     = 'Nikon'

Select * from Cost_of_Nikon_Cameras_and_Lenses;
```

Sample Data

Camera Model text	Lens Focal Length character varying(9)	Cost of Camera and Lens money
D3200	18-140	$1,093.90
D3200	50	$713.90
D5100	18-140	$1,243.90
D5100	50	$863.90
D610	18-140	$2,593.90
D610	50	$2,213.90
D7000	18-140	$1,593.90
D7000	50	$1,213.90
D7100	18-140	$1,743.90
D7100	50	$1,363.90
D800	18-140	$3,393.90
D800	50	$3,013.90
D800E	18-140	$3,593.90
D800E	50	$3,213.90
Df	18-140	$3,343.90
Df	50	$2,963.90

Compatible Printers and Inks

```
Create View Compatible_Printers_and_Inks AS
Select Distinct pr.brand as "Printer Brand", pr.model as "Printer Model",
i.brand as "Ink Brand", i.inkNumber as "Ink Number"
    from  printers pr, ink i
    where pr.brand = i.brand
    order by pr.brand

Select * from Compatible_Printers_and_Inks;
```

Sample Data

Printer Brand text	Printer Model text	Ink Brand text	Ink Number text
Canon	Pixma MX922	Canon	CLI-8
Canon	Pixma Pro-1	Canon	CLI-8
Epson	Artisan 143	Epson	T5801
Epson	Artisan 143	Epson	T5804
Epson	Artisan 143	Epson	T5805
Epson	Artisan 143	Epson	T5807
Epson	Artisan 143	Epson	T580B
Epson	Stylus R200	Epson	T5801
Epson	Stylus R200	Epson	T5804
Epson	Stylus R200	Epson	T5805
Epson	Stylus R200	Epson	T5807
Epson	Stylus R200	Epson	T580B
Epson	Stylus R288	Epson	T5801
Epson	Stylus R288	Epson	T5804
Epson	Stylus R288	Epson	T5805
Epson	Stylus R288	Epson	T5807
Epson	Stylus R288	Epson	T580B
Epson	Stylus R300	Epson	T5801
Epson	Stylus R300	Epson	T5804
Epson	Stylus R300	Epson	T5805
Epson	Stylus R300	Epson	T5807
Epson	Stylus R300	Epson	T580B
HP	Officejet P	HP	564
HP	Photosmart	HP	564

Compatible Printers and Paper

```
Select Distinct pr.brand as "Printer Brand", pr.model as "Printer Model",
p.brand as "Paper Brand", p.sizeInches as "Paper Size"
    from printers pr, paper p
    where pr.brand = p.brand
    Order by pr.brand

Select * from Compatible_Printers_and_Paper;
```

Sample Data

Printer Brand text	Printer Model text	Paper Brand text	Paper Size text
Canon	Pixma MX922	Canon	5x7
Canon	Pixma MX922	Canon	8.5x11
Canon	Pixma Pro-100	Canon	5x7
Canon	Pixma Pro-100	Canon	8.5x11
Epson	Artisan 1430	Epson	17x22
Epson	Artisan 1430	Epson	8.5x11
Epson	Stylus R2000	Epson	17x22
Epson	Stylus R2000	Epson	8.5x11
Epson	Stylus R2880	Epson	17x22
Epson	Stylus R2880	Epson	8.5x11
Epson	Stylus R3000	Epson	17x22
Epson	Stylus R3000	Epson	8.5x11
HP	Officejet Pro 8600	HP	4x6
HP	Officejet Pro 8600	HP	5x7
HP	Officejet Pro 8600	HP	8.5x11
HP	Photosmart 7520	HP	4x6
HP	Photosmart 7520	HP	5x7
HP	Photosmart 7520	HP	8.5x11

Reports and Queries

Compatible Cameras and Lenses

This report produces a list of all cameras, information about that camera, the lenses that work with each camera, and information about those lenses. This will allow users to see what kind of lenses work with the particular camera they have/are researching for.

```
Select c.brand as "Camera Brand", c.model as "Camera Model", c.retailPriceUSD
as "Price of Camera in USD", l.brand as "Lens Brand", l.focalLengthMM as
"Lens Focal Length", l.retailPriceUSD as "Cost of Lens in USD"
    from cameras c, lenses l
    where c.mountType = l.mountType
    order by c.model;
```

Sample Data

Camera Brand text	Camera Model text	Price of Camera in USD money	Lens Brand text	Lens Focal Length character varying(9)	Cost of Lens in USD money
Canon	60D	$699.00	Canon	40	$149.00
Canon	60D	$699.00	Canon	70-300	$649.99
Canon	60D	$699.00	Canon	18-135	$549.00
Nikon	D3200	$496.95	Nikon	50	$216.95
Nikon	D3200	$496.95	Nikon	18-140	$596.95
Nikon	D5100	$646.95	Nikon	18-140	$596.95
Nikon	D5100	$646.95	Nikon	50	$216.95
Nikon	D610	$1,996.95	Nikon	50	$216.95
Nikon	D610	$1,996.95	Nikon	18-140	$596.95
Nikon	D7000	$996.95	Nikon	18-140	$596.95
Nikon	D7000	$996.95	Nikon	50	$216.95
Nikon	D7100	$1,146.95	Nikon	18-140	$596.95
Nikon	D7100	$1,146.95	Nikon	50	$216.95
Nikon	D800	$2,796.95	Nikon	18-140	$596.95
Nikon	D800	$2,796.95	Nikon	50	$216.95
Nikon	D800E	$2,996.95	Nikon	18-140	$596.95
Nikon	D800E	$2,996.95	Nikon	50	$216.95
Nikon	Df	$2,746.95	Nikon	50	$216.95
Nikon	Df	$2,746.95	Nikon	18-140	$596.95
Canon	EOS-1D X	$6,799.00	Canon	24-70	$2,299.00
Canon	EOS-1D X	$6,799.00	Canon	18-135	$549.00
Canon	EOS-1D X	$6,799.00	Canon	85	$419.00
Canon	EOS-1D X	$6,799.00	Canon	70-300	$649.99
Canon	EOS-1D X	$6,799.00	Canon	50	$399.99
Canon	EOS-1D X	$6,799.00	Canon	70-200	$2,499.00
Canon	EOS-1D X	$6,799.00	Canon	40	$149.00
Canon	EOS 5D Mark	$3,399.00	Canon	18-135	$549.00
Canon	EOS 5D Mark	$3,399.00	Canon	70-300	$649.99
Canon	EOS 5D Mark	$3,399.00	Canon	40	$149.00

Compatible Canon Printers, Paper, and Ink

This report gives a list of all Canon printers, and the paper and ink that can be used in those printers. This allows users to see what kind of ink and paper can be used in their respective printers, and the query can easily be modified to search for a different brand of printers.

```
Select distinct pr.brand as "Brand", pr.model as "Printer Model",
pr.printerType as "Printer Type", p.sizeInches as "Paper Size in Inches",
i.inkNumber as "Ink Number", i.color as "Ink Color"
    from printers pr, paper p, ink i
    where pr.brand = p.brand
    and   pr.brand = i.brand
    and   pr.brand = 'Canon'
    order by pr.model;
```

Sample Data

Brand text	Printer Model text	Printer Type text	Paper Size in Inches text	Ink Number text	Ink Color text
Canon	Pixma MX922	Inkjet	5x7	CLI-8	Magenta
Canon	Pixma MX922	Inkjet	8.5x11	CLI-8	Magenta
Canon	Pixma MX922	Inkjet	5x7	CLI-8	Yellow
Canon	Pixma MX922	Inkjet	5x7	CLI-8	Cyan
Canon	Pixma MX922	Inkjet	8.5x11	CLI-8	Black
Canon	Pixma MX922	Inkjet	5x7	CLI-8	Black
Canon	Pixma MX922	Inkjet	8.5x11	CLI-8	Yellow
Canon	Pixma MX922	Inkjet	8.5x11	CLI-8	Cyan
Canon	Pixma Pro-100	Inkjet	8.5x11	CLI-8	Yellow
Canon	Pixma Pro-100	Inkjet	5x7	CLI-8	Black
Canon	Pixma Pro-100	Inkjet	5x7	CLI-8	Magenta
Canon	Pixma Pro-100	Inkjet	8.5x11	CLI-8	Black
Canon	Pixma Pro-100	Inkjet	8.5x11	CLI-8	Magenta
Canon	Pixma Pro-100	Inkjet	8.5x11	CLI-8	Cyan
Canon	Pixma Pro-100	Inkjet	5x7	CLI-8	Yellow
Canon	Pixma Pro-100	Inkjet	5x7	CLI-8	Cyan

Stored Procedures

Check Camera Price Update

This procedure checks to make sure that if a camera's price is updated the value is greater than zero dollars, and if it is not greater than zero dollars it replaces the value with the word 'Invalid'. This makes sure that a negative price does not enter the database, which could cause problems with other queries and views.

```
Create procedure check_camera_price_update()
    returns refcursor AS
    $body$
    declare
        ref refcursor;
    Begin
     IF (camera.retailPriceUSD < 0) THEN
        update camera set camera.retailPriceUSD = 'Invalid' where
camera.retailPriceUSD < 0;
    End if;
End
    $body$
    Language plpgsql;
```

Triggers

Check Price

This trigger executes the check_camera_price_update procedure after an update on the cameras table is performed.

```
Create Trigger check_price
After update on cameras
for each row
execute procedure check_camera_price_update();
```

Security

The security on this database allows users to insert, update, and select data, but does not give them the ability to delete data.

The security on this database also allows administrators to delete data on top of insert, updating, and selecting data.

Users

```
Create User PhotographyUser with password 'photog';

Revoke all on Cameras  from PhotographyUser;
Revoke all on Lenses   from PhotographyUser;
Revoke all on Cards    from PhotographyUser;
Revoke all on Printers from PhotographyUser;
Revoke all on Paper    from PhotographyUser;
Revoke all on Ink      from PhotographyUser;

Grant insert, update, select on Cameras to PhotographyUser;
Grant insert, update, select on Lenses to PhotographyUser;
Grant insert, update, select on Cards to PhotographyUser;
Grant insert, update, select on Printers to PhotographyUser;
Grant insert, update, select on Paper to PhotographyUser;
Grant insert, update, select on Ink to PhotographyUser;
```

Admins

```
Create user PhotographyAdmin with password 'prophotog';

Revoke all on Cameras  from PhotographyAdmin;
Revoke all on Lenses   from PhotographyAdmin;
Revoke all on Cards    from PhotographyAdmin;
Revoke all on Printers from PhotographyAdmin;
Revoke all on Paper    from PhotographyAdmin;
Revoke all on Ink      from PhotographyAdmin;

Grant insert, update, delete, select on Cameras to PhotographyAdmin;
Grant insert, update, delete, select on Lenses to PhotographyAdmin;
Grant insert, update, delete, select on Cards to PhotographyAdmin;
Grant insert, update, delete, select on Printers to PhotographyAdmin;
Grant insert, update, delete, select on Paper to PhotographyAdmin;
Grant insert, update, delete, select on Ink to PhotographyAdmin;
```

Implementation Notes

To implement the database one first has to load all of the create table statements, then load all of the insert into statements, and then one can run all the reports, queries, and views that they would like.

Known Problems

The only known problem is that there is no column for sale prices of each item in case an item goes on sale and you want to see the retail price and the current sale price at the same time.

Future Enhancements

- To further enhance the database more views can be created to see how different information is related.
- More information about each product could also be included in the descriptions, including
    - Weight of lenses and cameras
    - Max paper sizes of printers
    - Average number of pages printed for each ink cartridge