Database 2
Obligatorisk oppgave
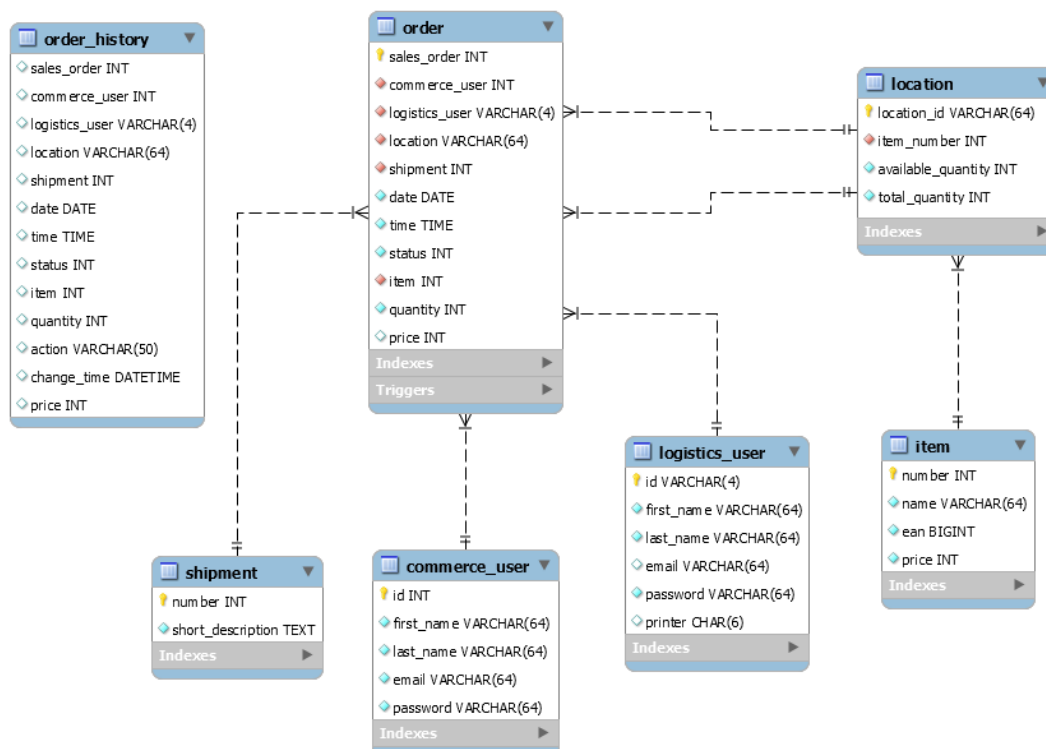# Høst 2020

Gruppemedlemmer

Hans Kristian Markeseth   233569

Christopher Tveråen   226526

Marthin Hauge   233619

Kort beskrivelse av Databasen

Vi har valgt å lage en database om noe vi alle har interesse for. Vi har hentet inspirasjon fra Komplett.no som er ledende innen datautstyr og ulike produkter. Vår database inneholder ulike produkter der vi har laget databasen vår som et lite lager.

ER Diagram

SQL spørringer mot databasen

EXPLAIN SELECT `order`.sales_order, CONCAT(cu.first_name, ' ', cu.last_name) AS 'Name', cu.email, `order`.price FROM `order` JOIN commerce_user cu on `order`.commerce_user = cu.id WHERE status = 0 AND `order`.date > 2020-01-1;

id	select_type	table	partitions	type	possible_keys	key	key_len	ref	rows	filtered	Extra
1	SIMPLE	order	<null>	ALL	order_commerce_user_id_fk	<null>	<null>	<null>	81	3.33	Using where; Using filesort
1	SIMPLE	cu	<null>	eq_ref	PRIMARY	PRIMARY	4	DAT2000.order.commerce_user	1	100	<null>

Som vi kan se her så har vi en spørring som er relativt lite effektiv da vi ikke har noen plan for å filtrere bort commerce_user rader, siden vi ønsker å vise informasjon fra den kan det også være en mulighet for å begrense hvem vi ser. Denne spørringen har altså sett på 2 kolonner, status og dato. Den sjekker da tabellen for en dato som er i år eller over og at status må være 0, da fjerner den fort alle som har status lik en, og jobber derfra videre med å sjekke om ordren er laget etter 1.01.2020.

EXPLAIN SELECT location, name, number, ean FROM `order` JOIN location l on `order`.location = l.location_id JOIN item i on l.item_number = i.number WHERE ean = '1334437998431' AND status = 0;

I denne select setningen kan man se at vi kombinerer flere tabeller på hverandre for å få ut informasjonen som kreves for å hente varen, vi trenger navnet og nummer, samt lokasjonen og ean for å se at ean stemmer med varen som vi har hentet.

select_type	table	partitions	type	possible_keys	key	key_len	ref	rows	filtered	Extra
SIMPLE	i	<null>	const	PRIMARY,item_ean_uindex	item_ean_uindex	8	const	1	100	<null>
SIMPLE	l	<null>	ref	PRIMARY,location_item_number_fk	location_item_number_fk	4	const	1	100	Using index
SIMPLE	order	<null>	ref	order_location_location_id_fk	order_location_location_id_fk	258	DAT2000.l.location_id	1	10	Using where

Som man kan se her henter vi ut data fra tre tabeller der vi henter ut to konstanter som betyr at det er kun en ordre som kan vises. Dette er en veldig effektiv spørring da vi henter ut verdiene på en slik måte at vi fjerner flest mulige muligheter.

EXPLAIN UPDATE `order` SET status = 1 WHERE sales_order = (SELECT MAX(sales_order));

id	select_type	table	partitions	type	possible_keys	key	key_len	ref	rows	filtered	Extra
1	UPDATE	order	<null>	index	<null>	PRIMARY	4	<null>	81	100	Using where
2	DEPENDENT SUBQUERY	<null>	<null>	<null>	<null>	<null>	<null>	<null>	<null>	<null>	No tables used

Rask og liten update query da vi skal fullføre den siste ordren vi har fått inn, det gjøres med en dependent subquery som tilsier at vi henter ut sales_order fra en SELECT spørring der vi da bruker funksjonen MAX som henter ut det høyeste tallet fra en kolonne. Dette gir oss da den nyeste ordren uten å sortere på dato som er tregere enn å søke på en statisk verdi.

EXPLAIN SELECT sales_order, commerce_user, logistics_user, status, action, change_time FROM order_history WHERE action = 'UPDATE' AND change_time < NOW();

Showing the updated orders until this point in time.

id	select_type	table	partitions	type	possible_keys	key	key_len	ref	rows	filtered	Extra
1	SIMPLE	order_history	<null>	ALL	<null>	<null>	<null>	<null>	414	3.33	Using where

Grei query som viser ordre historikk, for å kunne begrense det litt mer og få en optimalisert query bruker vi også funksjonen now, så den ikke skal lete etter alle data, men kun data som er satt til før dagens dato.

På generell basis er det noen felles ting man kan gjøre for å optimalisere en database. For eksempel når man koder inn IF funksjoner så kan man bruke EXISTS, dette vil føre til en raskere og mer effektiv funksjon. Man kan også for mye større databaser bruke midlertidige tabeller som allerede er filtrert til å lage joins på. Dette er en effektiv løsning dersom man har databaser med flere millioner rader. Det er også en dårlig ide å bruke SELECT * dette kan skape problemer videre inn i applikasjonens liv da flere kolonner som man ikke trenger blir lagt til og brukt under spørringer. Derfor er det viktig å alltid deklarere hvilke kolonner man har bruk for i spørringer. Man kan også minske eksekveringstid ved å ikke bruke underspørringer som har informasjon fra forelde spørringen. Dette kan forårsake en «row-by-row» spørring som ofte tar mye lenger tid siden den skal gå igjennom alt en rad av gangen for å hente den informasjonen du har spurt om å få ut. Sist er det å unngå bruken av loops, bruk heller mer avanserte spørringer, ved å bruke en loop låser du mange av ressursene til en spesifikk oppgave, som kan senke effektiviteten til de andre spørringene som kommer inn mens man holder på å kjøre en loop.

Bygg database

create table commerce_user
(
    id   int auto_increment
        primary key,
    first_name varchar(64) not null,
    last_name varchar(64) not null,
    email   varchar(64) not null,
    password   varchar(64) not null,
    constraint comerce_user_email_uindex
        unique (email)
);

create table item
(
    number int auto_increment
        primary key,
    name   varchar(64) not null,
    ean   bigint   not null,
    price int   not null,
    constraint item_ean_uindex

```sql
    unique (ean)
);

create table location
(
    location_id        varchar(64) not null
        primary key,
    item_number        int         not null,
    available_quantity int         not null,
    total_quantity     int         not null,
    constraint location_item_number_fk
        foreign key (item_number) references item (number)
);

create table logistics_user
(
    id         varchar(4)  not null
        primary key,
    first_name varchar(64) not null,
    last_name  varchar(64) not null,
    email      varchar(64) null,
    password   varchar(64) not null,
    printer    char(6)     null,
    constraint logistics_user_printer_uindex
        unique (printer)
);

create table order_history
(
    sales_order    int         null,
    commerce_user  int         null,
    logistics_user varchar(4)  null,
    location       varchar(64) null,
    shipment       int         null,
    date           date        null,
    time           time        null,
    status         int         null,
    item           int         null,
```

```sql
    quantity        int         null,
    action          varchar(50) null,
    change_time     datetime    null,
    price           int         null
);

create table shipment
(
    number          int  not null
        primary key,
    short_description text not null
);

create table `order`
(
    sales_order     int auto_increment
        primary key,
    commerce_user   int         not null,
    logistics_user  varchar(4)  not null,
    location        varchar(64) not null,
    shipment        int         not null,
    date            date        not null,
    time            time        not null,
    status          int         not null,
    item            int         not null,
    quantity        int         not null,
    price           int default 0 null,
    constraint order_commerce_user_id_fk
        foreign key (commerce_user) references commerce_user (id),
    constraint order_location_item_number_fk
        foreign key (item) references location (item_number),
    constraint order_location_location_id_fk
        foreign key (location) references location (location_id),
    constraint order_logistics_user_id_fk
        foreign key (logistics_user) references logistics_user (id),
    constraint order_shipment_number_fk
        foreign key (shipment) references shipment (number)
);
```

Fyll database med test data

INSERT INTO commerce_user (first_name, last_name, email, password) VALUES ('Aleksander','Hansen','Aleksander.Hansen@inbox.com','NW5JQV21CX76ZSZUXDP15W00 F0MKRFY9K6ZCSK2Q2QQYX762XQJCH0XJ1C1PFHZN');

INSERT INTO commerce_user (first_name, last_name, email, password) VALUES ('Jonas','Johansen','Jonas.Johansen@yahoo.com','FLAUOGVR52VSMFIR83UJUCTXHTB75X ZCM2X5ZESSD1CQY6R8MQYKRZWV63GIQIWK');

INSERT INTO commerce_user (first_name, last_name, email, password) VALUES ('Markus','Olsen','Markus.Olsen@opera.com','A5VWDDVK44XR9JJIPG76DIBQ8WG2UT44N 12G3L5ULA977E6AY4BKFNPJWOQ44M86');

INSERT INTO commerce_user (first_name, last_name, email, password) VALUES ('Markus','Larsen','Markus.Larsen@aol.com','5VLKWFIEIR82DAOF8BIZZQLGX003DW44S0 UH0ADX7F63POAG20FK4HYEONP4NC8V');

INSERT INTO commerce_user (first_name, last_name, email, password) VALUES ('Marcus','Andersen','Marcus.Andersen@yandex.com','0MOZBQFQ5DBWUHE4AWWKTJBG TV8K3C4TBC16RVMX84NQDRXHB4E6XAMZOXYAQ0DF');

INSERT INTO commerce_user (first_name, last_name, email, password) VALUES ('Teo','Pedersen','Teo.Pedersen@yahoo.com','3KNUNZKRTF24SVYO5SDECM7WF9YRHO2K 2QZYMROEAAK6YKGK79JV3047TQJXVJVK');

INSERT INTO commerce_user (first_name, last_name, email, password) VALUES ('Herman','Nilsen','Herman.Nilsen@hotmail.com','5K6SX8ACYG1FFYCPCK63LAIQ1V6MJKA FZFMA9VG3F27CE5L8GU4HVXRI7FPG9N9H');

INSERT INTO commerce_user (first_name, last_name, email, password) VALUES ('Hermann','Kristiansen','Hermann.Kristiansen@outlook.com','STRM9O9ZECO0W3OHS4Z GKHJF2HPPGOZIW7NHMXFJ28ADKSJIK035BSTX83J16HP5');

INSERT INTO commerce_user (first_name, last_name, email, password) VALUES ('Mikkel','Jensen','Mikkel.Jensen@me.com','AUCZCAP0M7Y0HRD1OR9DEPE952W9OPP3ZT 1USEZ7Z07ZOMKFNTZ8PNPPP5G0W7T2');

INSERT INTO commerce_user (first_name, last_name, email, password) VALUES ('Ulrik','Karlsen','Ulrik.Karlsen@outlook.com','UZ0EAHTB0FCM77Y43LX53OSVXEGZEWUY ZWIWQHU2T0K7R9ZZX7V1X3Z8992B6EYX');

INSERT INTO commerce_user (first_name, last_name, email, password) VALUES ('Adrian','Johnsen','Adrian.Johnsen@inbox.com','M3S86DTQGQGJ0SPGWD810BC3QCK8W 3GEAC1JWXYCDHDS01FPUUV7BY1TCZY6ZGRS');

```sql
INSERT INTO commerce_user (first_name, last_name, email, password) VALUES
('Ludvig','Pettersen','Ludvig.Pettersen@aol.com','P25XML3J5TWALHJ1PL6BOFUVFMYY4U5
UOPHIAAVUORRQEJPYP19IU5KMEDX0UWEN');
INSERT INTO commerce_user (first_name, last_name, email, password) VALUES
('Ludvik','Eriksen','Ludvik.Eriksen@me.com','7G71QEISZKEKDAB1FJEO1ZCGY7WDL1NLW
VZX1HD5PFP7ZJHAA4EWZDADZFHLYWIP');
INSERT INTO commerce_user (first_name, last_name, email, password) VALUES
('Leon','Berg','Leon.Berg@outlook.com','EULY894EA7ZQB4FVB6GGS29DUT75PLXO8P8A8
FBSQBRXDB5XV0DG8ZAD8B6C39Y3');
INSERT INTO commerce_user (first_name, last_name, email, password) VALUES
('Adam','Haugen','Adam.Haugen@yahoo.com','FA64FQ1ZBR6Z2WOXXDCHS7ZK4YWWBP
LCMV292CLE1SYWHIBY0PPKF51ENCBLAP1V');
INSERT INTO commerce_user (first_name, last_name, email, password) VALUES
('Even','Hagen','Even.Hagen@hotmail.com','219COA1WQP91PS0XV5ZOZ0XLN5AJ4ELZD
W49QEX81DMZEQVFQA5711K1KE3HPP81');
INSERT INTO commerce_user (first_name, last_name, email, password) VALUES
('Sebastian','Johannessen','Sebastian.Johannessen@hotmail.no','C4E0JA78U5IZ8CW6GA
BJ1XXE8D4ECL3OJZEG28JTXAIGWBHKU54K6TDMEWPJKU8C');
INSERT INTO commerce_user (first_name, last_name, email, password) VALUES
('Daniel','Andreassen','Daniel.Andreassen@foxmail.com','WC3VHVW14H30JKDK5C6XSGE
85DEH4YT6JXV2XPDG5D0RPK1BNF88PFILVX8MKV4W');
INSERT INTO commerce_user (first_name, last_name, email, password) VALUES
('Felix','Jacobsen','Felix.Jacobsen@opera.com','2KYH0G5BZ1YW6R7K2Q57JKC9FZS5FNPF
97FKRC0100PUI8QPKBQX03X6N1WBNGTK');
INSERT INTO commerce_user (first_name, last_name, email, password) VALUES
('Johan','Dahl','Johan.Dahl@aol.com','A0ZNBKWMRXKEMUJVQQO5G168WWFB1GBAPPN4
YIHMPRKSZHF1EI7TA4EALZU4ESS3');
INSERT INTO commerce_user (first_name, last_name, email, password) VALUES
('Johan','Jørgensen','Johan.Jørgensen@online.com','K1CD2TU6P21DRYSVS16JU57E7TGQ
CMPWVW3HWG9LVPCB8PTTEXCPPL2KJEX79JEB');
INSERT INTO commerce_user (first_name, last_name, email, password) VALUES
('Johann','Henriksen','Johann.Henriksen@inbox.com','0CG1HF6VGNQI7TFCREY53UZS7OU
4WZSXMKMVWY7BWZGVA9XTO19OIGYEBWI8CB31');
INSERT INTO commerce_user (first_name, last_name, email, password) VALUES
('Iver','Lund','Iver.Lund@mozilla.com','X0FYHC2A3ZCLAMXRLT1UNSJE3PPB99GCWCPY0Z
TJ2S5WQ205RCQQAX7R0XUFKGR4');
```

INSERT INTO commerce_user (first_name, last_name, email, password) VALUES ('Alfred','Halvorsen','Alfred.Halvorsen@yandex.com','2L9FLJ66OGE6LPQJT0Q90G41B1XZ 3E8JZE2AB3I8SQE0GW9C1OUGEDIOXE8YKNER');

INSERT INTO commerce_user (first_name, last_name, email, password) VALUES ('Kristian','Sørensen','Kristian.Sørensen@aol.com','937QMREXXKSYM7TM3D4IW77PEV3O 5Z3KQEJECPC5KZ7SD91YP3L14RXWA0HKFQ9U');

INSERT INTO commerce_user (first_name, last_name, email, password) VALUES ('Kristian','Jakobsen','Kristian.Jakobsen@hotmail.com','IPGL1EGZ5NMAVCH5IRF83NX7PR OTOA3R3Z8JK74E89YYH8XSYV8ZSL0IBDVFB4HS');

INSERT INTO commerce_user (first_name, last_name, email, password) VALUES ('Christian','Moen','Christian.Moen@online.com','A9T3HD3XHFTVOV6I8AGRP0YGFWYXQG K54PDWL276Q9V1M3UYQWVHWU1Q9TYPZ1C1');

INSERT INTO commerce_user (first_name, last_name, email, password) VALUES ('Leo','Gundersen','Leo.Gundersen@me.com','B4LT5TSDXSASR6SK54L77TR9Y6WO68LJI UOCTWYVCZM3935Z2NA5UQVHI0XBLGMX');

INSERT INTO commerce_user (first_name, last_name, email, password) VALUES ('Martin','Iversen','Martin.Iversen@hotmail.no','4B6DRZNXSNEDUPFSWYKOCZHO24OWZ ED5EEQ6NDZVG858Q74EW9EFJQ22KKYMZGRF');

INSERT INTO commerce_user (first_name, last_name, email, password) VALUES ('Victor','Strand','Victor.Strand@me.com','A51JJQH2YU4G86TJBJRZDP5SH6VQ34KK1DYZ 3EEIWKFRW2QABRU4GGVQQ1LTMR91');

INSERT INTO commerce_user (first_name, last_name, email, password) VALUES ('Victor','Solberg','Victor.Solberg@hotmail.no','VGFYDS8DGHE4RRUHT71BG2CPJQ23454C 73Y9HPR9PGY3E7TILVLLCFZTBAYL4HBX');

INSERT INTO commerce_user (first_name, last_name, email, password) VALUES ('Viktor','Svendsen','Viktor.Svendsen@foxmail.com','FUQPXRYSXB52TJU3IECJKHG2PI8S WXFOWPDPJ0RQRQW2REVU2H0WBVP8YMHS5ZJF');

INSERT INTO commerce_user (first_name, last_name, email, password) VALUES ('Sigurd','Eide','Sigurd.Eide@mail.com','SWUMAQYYCCTWFMAYRM918AVN66A5DHFFEUXY L8RXN7ZJP2M80CJ4WXSJO4XFQERA');

INSERT INTO commerce_user (first_name, last_name, email, password) VALUES ('Nikolai','Knutsen','Nikolai.Knutsen@hotmail.no','ILS3T9ROMROW35HSHK3EEL0V5GL879 6HEL54IAXXX5JXT5UJ5VJCD3RJAXQ2TLF6');

INSERT INTO commerce_user (first_name, last_name, email, password) VALUES ('Emma','Martinsen','Emma.Martinsen@me.com','AEXSIKP995XQAIFJTAV4Z6XR5QMRV19 UNQTHVHFMZWPL9QQQFJSIN9JL33LYFNVL');

```sql
INSERT INTO commerce_user (first_name, last_name, email, password) VALUES
('Nora','Paulsen','Nora.Paulsen@yandex.com','JJ964YJT9N44NRYG2481G947PORGOV1IQL
5FFTFAGQBTQYI50X0DL31PCYTR1LOU');
INSERT INTO commerce_user (first_name, last_name, email, password) VALUES
('Norah','Bakken','Norah.Bakken@hotmail.no','PX7T5BKUPHIF92GNCTMCKJMJRUHFZF598
ZMF2DJ8AQ7AOTQEV93Q8EZAQAVSGYNK');
INSERT INTO commerce_user (first_name, last_name, email, password) VALUES
('Sofie','Kristoffersen','Sofie.Kristoffersen@inbox.com','Q11ZVM7SPWUIP0BZGDFIH6AGE
Z1G2S76V9LU20MCPRE1WF43SXP5GRD0Q4WF9S08');
INSERT INTO commerce_user (first_name, last_name, email, password) VALUES
('Sophie','Mathisen','Sophie.Mathisen@me.com','LSNR9KDMOLLFPQRZ4M1JDU3E9XS51NI
LF1AJ325R0HE5DEQUHU3ZAF2YQADWO5IQ');
INSERT INTO commerce_user (first_name, last_name, email, password) VALUES
('Ella','Lie','Ella.Lie@mail.com','YEBEBQXAQ7R44PK3Z0JE3A1Z91URKJUCXC93T6TOWNO
HSDA5E2LQ0BJBQX4AWQXU');
INSERT INTO commerce_user (first_name, last_name, email, password) VALUES
('Olivia','Amundsen','Olivia.Amundsen@mozilla.com','4FZO7A77BD769DY9M47UI57TJX43
9G4FXS2IEAR4A5YKAWS3EQ7PWC7G15330JCJ');
INSERT INTO commerce_user (first_name, last_name, email, password) VALUES
('Ada','Nguyen','Ada.Nguyen@hotmail.no','UIU8G747UTS4EMU8W6NTPAKMEBHNMA3SVT
0JRYVGFMX08R0P0QFCVJ68R8JUJNU1');
INSERT INTO commerce_user (first_name, last_name, email, password) VALUES
('Sofia','Rasmussen','Sofia.Rasmussen@online.com','IE7FOZ58RUOQ689U1FRTE5CG63G
SAI1HIU2L0XZC0KMC0NJAWJYV2CXS3LF2BVWM');
INSERT INTO commerce_user (first_name, last_name, email, password) VALUES
('Sophia','Ali','Sophia.Ali@outlook.com','NJERUJOQRE3VFN3GM9EF72FB4NPJUTHW2HUQ8
4FI2GFF1QERU6EC4Q9NGJK839L7');
INSERT INTO commerce_user (first_name, last_name, email, password) VALUES
('Sara','Lunde','Sara.Lunde@opera.com','FXESLZUNEUM09EJ2JFBPZDOJL8EJVCZ7TH4JZB
X4394ICPTZHA7JQRTW7L31RJ82');
INSERT INTO commerce_user (first_name, last_name, email, password) VALUES
('Sarah','Solheim','Sarah.Solheim@yandex.com','3V0J0L4W9RN776M2J766KB8MEILOUX8
BN513GWJP5BSTS6ENVSQJNSAWADK9BT2Z');
INSERT INTO commerce_user (first_name, last_name, email, password) VALUES
('Zara','Berge','Zara.Berge@inbox.com','IKKTZUZBUUSPVOIG8H18PLINDEUV04CEOLXU1
9UAU0BJ7JO25JD7KWS0MBGF2CUB');
```

```sql
INSERT INTO commerce_user (first_name, last_name, email, password) VALUES
('Maja','Moe','Maja.Moe@email.com','TK5MYYPOJ6UPI4P89PNX9C0Q6S4QXKISQP33OOI5
M7C4G4T0DGNY8IA226YXGMV3');
INSERT INTO commerce_user (first_name, last_name, email, password) VALUES
('Maia','Nygård','Maia.Nygård@mail.com','YWXBUIAGMH01LKI4PWTXXJDHA11YSY209Z1E
N10XSUD9ISHO2RG58EC23GWELZK9');
INSERT INTO commerce_user (first_name, last_name, email, password) VALUES
('Maya','Bakke','Maya.Bakke@opera.com','WP2LA5PAFRI878DBC1SI2LYT2DZ1QXKNZTEX
IX16NP0466TDKYGEOA0NJF5V49VX');
INSERT INTO commerce_user (first_name, last_name, email, password) VALUES
('Leah','Kristensen','Leah.Kristensen@hotmail.no','GS6NMXC30AQJSX2WNQPID3VR9JD21
Q38LMJD83FR69K7XQWOPR408GCA4J19NAOY');
INSERT INTO commerce_user (first_name, last_name, email, password) VALUES
('Lea','Fredriksen','Lea.Fredriksen@email.com','R47LGO95MD2NVKQO0E2DRT8U28XMAL
85W36RQ202SF5QJ02450HZ6PYU0ZOHIMJ6');
INSERT INTO commerce_user (first_name, last_name, email, password) VALUES
('Hanna','Holm','Hanna.Holm@yahoo.com','5Z0YOLYSQBUVWQ0TYRIOQIWZJUDTP2GKBE
67SUFKB3MCBLAW959NRPZ0PABXJ2MZ');
INSERT INTO commerce_user (first_name, last_name, email, password) VALUES
('Hannah','Lien','Hannah.Lien@aol.com','3T2T2O4PG0CHUH1JGJ6QQK669J3H0Z300E259
UVICPQ54ZUZ7G8HW2JXGGG3LZ5C');
INSERT INTO commerce_user (first_name, last_name, email, password) VALUES
('Tiril','Hauge','Tiril.Hauge@online.com','0OROXVHXIMU94OVK3FABBDBBI0GTVXV6MV25
LZ7ZYZ5AS3FE2Z36PBCG724WGEBB');
INSERT INTO commerce_user (first_name, last_name, email, password) VALUES
('Tirill','Christensen','Tirill.Christensen@outlook.com','9TO92GQBUVVBUJ49SOO8SOANQ9
SVJP2WYRDUH1AFUS8ALAOIUEG0EWQ2BPIC6SK6');
INSERT INTO commerce_user (first_name, last_name, email, password) VALUES
('Emma','Andresen','Emma.Andresen@foxmail.com','NHDJF521RH28DZA6QYP8N4O4E7P
6IJRFX72V2T6LVDXJM2F3H4OLU5BO51IBRSYS');
INSERT INTO commerce_user (first_name, last_name, email, password) VALUES
('Nora','Nielsen','Nora.Nielsen@mozilla.com','0GKZ0P7C567S4ICHZFCVZ8GLC6D1Z0PX4L
3F54FAD5OCD9IJDJY8J5DMKKHELPB6');
INSERT INTO commerce_user (first_name, last_name, email, password) VALUES
('Norah','Knudsen','Norah.Knudsen@email.com','CVUOBJDYDLENQOBRW9MI1J9I4KO1WJ
DAXNKN69JM6N847A9FBQCFJ6XLCNYRGY8S');
```

```sql
INSERT INTO commerce_user (first_name, last_name, email, password) VALUES
('Sofie','Evensen','Sofie.Evensen@foxmail.com','6LIVJBMJ4YJ4VGKVFOA3UWZNXUTS850
652IIYH0G3CYK058FSKQPXJMB6U4T9G7U');

INSERT INTO commerce_user (first_name, last_name, email, password) VALUES
('Sophie','Sæther','Sophie.Sæther@yandex.com','SZNJCOCUW4J2CRGCXVLHG6A07XZ2N
J3IQSGRJ637M521CT3OT9OXK3HUQPT12SQI');

INSERT INTO commerce_user (first_name, last_name, email, password) VALUES
('Ella','Aas','Ella.Aas@inbox.com','2Q3E85CMXCLN7TUVAHVDTZLML9XDAJOZHT8KLLNLD
6FGNLIBI4YC6XJA99ZGVNIA');

INSERT INTO commerce_user (first_name, last_name, email, password) VALUES
('Olivia','Myhre','Olivia.Myhre@email.com','60F0SAQ2M8FR3UNEKY8IWN05XG400UMAND
N7X7VTHNKN4864X38NO5VCMHEQVD9X');

INSERT INTO commerce_user (first_name, last_name, email, password) VALUES
('Ada','Hanssen','Ada.Hanssen@me.com','3DPI4LK6WM3CAS7BL66UO0Z9MXIHRBF658PC
4VOP025IQO7WSAVD71Q9F64SHXXB');

INSERT INTO commerce_user (first_name, last_name, email, password) VALUES
('Sofia','Ahmed','Sofia.Ahmed@hotmail.no','QVKMGVN97ZHZO071P98OJ7FL8PIP83T3UPY
DO8QRVGAL35Y5L24C33DOCH1BC55G');

INSERT INTO commerce_user (first_name, last_name, email, password) VALUES
('Sophia','Haugland','Sophia.Haugland@foxmail.com','6TEIZFN7TY8PCXGURW8KFV1J3EX
2TT165MWB6IP3TZUALNXDT5KVGZZKLW4LDVN7');

INSERT INTO commerce_user (first_name, last_name, email, password) VALUES
('Sara','Thomassen','Sara.Thomassen@foxmail.com','F6HELP093SAVDMYJEULPHFJSLJ7X
U2PWYCP36UTGPPALCABRI552EGFNOTRWM0LV');

INSERT INTO commerce_user (first_name, last_name, email, password) VALUES
('Sarah','Sivertsen','Sarah.Sivertsen@mail.com','UZJU6IYG4OQ1MKE0E32DV365T3KXJGV
N97HP67DXSDRL95DP3ZMUYRZ7QKVTV4IT');

INSERT INTO commerce_user (first_name, last_name, email, password) VALUES
('Zara','Simonsen','Zara.Simonsen@yandex.com','BA3QGG4NXTTZ21FLN9OI5S4XEFJMKY
MZQ8PRBTB2RAPHUS6NNTCB226VNH5H2KVU');

INSERT INTO commerce_user (first_name, last_name, email, password) VALUES
('Maja','Danielsen','Maja.Danielsen@me.com','7N78K9XWE9UUJRV8VUIUKRRWYG6MGIQ
XWU0QO2DYYO9RIFUHWZO2K7P99KL5QBIH');

INSERT INTO commerce_user (first_name, last_name, email, password) VALUES
('Maia','Berntsen','Maia.Berntsen@inbox.com','9FK5TDIMPV866J9BPYKQ0Q15UQ45B2H5I
RHA16VOBNQV4N8993TSNYRVGTREZ6M5');
```

INSERT INTO commerce_user (first_name, last_name, email, password) VALUES ('Maya','Sandvik','Maya.Sandvik@email.com','LVN4HZP9J3BM39LYP8Y4AG4M9QY1CWOCO7R5R3GY6Y8DUQ4UWPVY44090KQADFXC');
INSERT INTO commerce_user (first_name, last_name, email, password) VALUES ('Leah','Rønning','Leah.Rønning@foxmail.com','Q71DZBP7HCWDYXADBN3I74SYCCV13ZV3MCO84AQV2UN72C0YDSLU2L721OB2GGT3');
INSERT INTO commerce_user (first_name, last_name, email, password) VALUES ('Lea','Arnesen','Lea.Arnesen@email.com','F6P3T6X7Y08LR5NW5B0BHQ6JDTEI8R7PSPZEW0LFKFMZNEFMCAQF53XP10MO3CZK');
INSERT INTO commerce_user (first_name, last_name, email, password) VALUES ('Hanna','Antonsen','Hanna.Antonsen@mail.com','6TABIEVQXSJVMDGOG7CL0J06KOOKE9IID77U1BAXI1PY4KLUOEA8I9CCTN4KEHUD');
INSERT INTO commerce_user (first_name, last_name, email, password) VALUES ('Hannah','Næss','Hannah.Næss@mozilla.com','UBTVRDCPI6AIU6SX468O9RPBWL2GEP3HVQS87RDIGZKQMS31OC15Y766JJ35HIEK');
INSERT INTO commerce_user (first_name, last_name, email, password) VALUES ('Ali','Vik','Ali.Vik@mail.com','6RT9O2PXXCVVOVA5MG6TWQY270XYM1CT16SMMADSYAOF7WWCLZDSWTRV6AGLUBRP');
INSERT INTO commerce_user (first_name, last_name, email, password) VALUES ('Henrik','Haug','Henrik.Haug@hotmail.no','HRMSGVW8RKEUNAKIPN6GAU1DWTOWB15GNX15UDCSP3SU6Z9LXJKGKM7BFGVZJ3BE');
INSERT INTO commerce_user (first_name, last_name, email, password) VALUES ('Ole','Ellingsen','Ole.Ellingsen@hotmail.com','WZWEVZ7KMDTBZO89T7070MMZ1PKJZCY35T3EMQ3DGFZGGLRSP6GADFCGXKEFER6X');
INSERT INTO commerce_user (first_name, last_name, email, password) VALUES ('Hans','Thorsen','Hans.Thorsen@email.com','2JWLSFC0TB6JROO2KOTK08GARKIQ0DH5XK3J7X8RZ7LVB0JWHMLA0NPCPOAC2GEU');

INSERT INTO item (number ,name, ean, price) VALUES ('1','Samsung 65" QLED 4K Smart TV QE65Q74','3313475675996','10393');
INSERT INTO item (number ,name, ean, price) VALUES ('2','iiglo tynn fullt bevegelig TV veggfeste','9915323112265','11476');
INSERT INTO item (number ,name, ean, price) VALUES ('3','LG 43" 4K Smart TV 43UN7300','1134468238958','14806');
INSERT INTO item (number ,name, ean, price) VALUES ('4','Sony UBP-X800M2 4K Blu-ray spiller','2862628282633','7238');
INSERT INTO item (number ,name, ean, price) VALUES ('5','Apple Remote','8924554397731','4379');

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INSERT INTO item (number ,name, ean, price) VALUES ('6','Finlux 32" LED TV','8697566411221','3975');
INSERT INTO item (number ,name, ean, price) VALUES ('7','Nvidia Shield TV','1334437998431','1658');
INSERT INTO item (number ,name, ean, price) VALUES ('8','Sony 32" LED Smart TV KDL32WE613','1691733126484','17959');
INSERT INTO item (number ,name, ean, price) VALUES ('9','Xiaomi Mi Box S','6889597811884','19729');
INSERT INTO item (number ,name, ean, price) VALUES ('10','Harman/Kardon Onyx Studio 5','6566724641633','18974');
INSERT INTO item (number ,name, ean, price) VALUES ('11','iiglo lydkabel miniJack 2m','4515574124542','11254');
INSERT INTO item (number ,name, ean, price) VALUES ('12','iiglo Strømkabel Schuko - C13 2 m','8164183231459','2194');
INSERT INTO item (number ,name, ean, price) VALUES ('13','Supra 2x1,6 høyttalerkabel 20m hvit','1958695846737','11482');
INSERT INTO item (number ,name, ean, price) VALUES ('14','Kabelholder KENSON Rib 50cm (3pk)','3728266298239','5174');
INSERT INTO item (number ,name, ean, price) VALUES ('15','Huawei P Smart Pro 128GB Breathing Crystal','8755981197171','3992');
INSERT INTO item (number ,name, ean, price) VALUES ('16','Samsung Galaxy S20 5G 128GB Grå','5617614132822','17203');
INSERT INTO item (number ,name, ean, price) VALUES ('17','Samsung Galaxy Note20 Ultra 5G 12GB+256GB Mystic Bronze','7845996535846','17073');
INSERT INTO item (number ,name, ean, price) VALUES ('18','OnePlus Nord 8+128GB Blue Marble','4957142539678','6805');
INSERT INTO item (number ,name, ean, price) VALUES ('19','Samsung Galaxy Xcover Pro 64 GB Sort','7294871535739','3026');
INSERT INTO item (number ,name, ean, price) VALUES ('20','Huawei Y6P 3+64GB Emerald Green','4987482156835','2850');
INSERT INTO item (number ,name, ean, price) VALUES ('21','iPhone 11 128 GB Sort','4675288624653','4886');
INSERT INTO item (number ,name, ean, price) VALUES ('22','iPhone SE 128GB Sort','5822143164873','16652');
INSERT INTO item (number ,name, ean, price) VALUES ('23','Jabra EVOLVE 75 Stereo UC','8524691635888','10833');
INSERT INTO item (number ,name, ean, price) VALUES ('24','Jabra Evolve 75e UC trådløst headset','7843634282278','13320');
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INSERT INTO item (number ,name, ean, price) VALUES ('25','Logitech H110 PC Headset','5312442354174','9237');

INSERT INTO item (number ,name, ean, price) VALUES ('26','Jabra Speak 510 for Microsoft Lync','9249126673611','19776');

INSERT INTO item (number ,name, ean, price) VALUES ('27','Nintendo Switch','2271115226828','7489');

INSERT INTO item (number ,name, ean, price) VALUES ('28','Dell G5 5505 Special Edition 15,6" FHD 144 Hz','7755389464933','18241');

INSERT INTO item (number ,name, ean, price) VALUES ('29','Miele CM 5310 ObsidianSort kaffemaskin','4271164887256','19616');

INSERT INTO item (number ,name, ean, price) VALUES ('30','Ergonomisk kontorstol med høy rygg og nakkestøtte','6457258793898','6655');

INSERT INTO item (number ,name, ean, price) VALUES ('31','Apple Watch Series 5 GPS','2413314488272','8157');

INSERT INTO item (number ,name, ean, price) VALUES ('32','Xiaomi Roborock S5 Max robotstøvsuger','5347754689579','16418');

INSERT INTO item (number ,name, ean, price) VALUES ('33','Mill Panelovn med glassfront, hvit 900W, WIFI','8457678955877','13285');

INSERT INTO item (number ,name, ean, price) VALUES ('34','AVA Høytrykkspyler Master P70 X-Large Bundle','5868215655669','17086');

INSERT INTO item (number ,name, ean, price) VALUES ('35','Philips OneBlade Face + Body','3875587976425','15143');

INSERT INTO item (number ,name, ean, price) VALUES ('36','Oppblåsbar julenisse 180 cm','5642878195721','10579');

INSERT INTO item (number ,name, ean, price) VALUES ('37','LED Reinsdyr med slede','3795987379565','3783');

INSERT INTO item (number ,name, ean, price) VALUES ('38','iiglo Lommelykt 10 000 Lumen','6923355589334','13547');

INSERT INTO item (number ,name, ean, price) VALUES ('39','Oppladbart batteri, 4400mAh 18650 Li-ion','6969944826564','16088');

INSERT INTO item (number ,name, ean, price) VALUES ('40','Bosch SMV68MX05E oppvaskmaskin','8624648835774','10262');

INSERT INTO item (number ,name, ean, price) VALUES ('41','ASUS GeForce GTX 1660 SUPER DUAL EVO OC','7613333141762','3061');

INSERT INTO item (number ,name, ean, price) VALUES ('42','AMD Ryzen 9 5900X Prosessor','6444275275731','17986');

INSERT INTO item (number ,name, ean, price) VALUES ('43','Samsung 27" Curved Gamingskjerm','5414778519187','11084');

INSERT INTO item (number ,name, ean, price) VALUES ('44','Logitech MX Anywhere 3 Graphite','4467222843263','16817');

INSERT INTO item (number ,name, ean, price) VALUES ('45','Intel Core i9-10850K Prosessor Limited','8469238655597','10347');

INSERT INTO item (number ,name, ean, price) VALUES ('46','Svive Hydra Streaming Kit','8171442938375','18558');

INSERT INTO item (number ,name, ean, price) VALUES ('47','Ergonomisk hev/senk skrivebord E-Zee med motor - trefarget','4275247918318','8169');

INSERT INTO item (number ,name, ean, price) VALUES ('48','Flettet kabelstrømpe - 1m','4145948321664','9429');

INSERT INTO item (number ,name, ean, price) VALUES ('49','Ergonomisk knestol','6889785749139','9889');

INSERT INTO item (number ,name, ean, price) VALUES ('50','iiglo PC rengjøringskit','7195618736123','11203');

INSERT INTO item (number ,name, ean, price) VALUES ('51','iiglo oppgraderings-kit til PC','8131285483599','8746');

INSERT INTO item (number ,name, ean, price) VALUES ('52','KENSON ANNA kontorstol - sort','6947347857949','16519');

INSERT INTO item (number ,name, ean, price) VALUES ('53','NZXT Kraken X63 CPU Kjøler','6576617997364','19036');

INSERT INTO item (number ,name, ean, price) VALUES ('54','ASUS ROG Strix LC 360 CPU Kjøler','7835288478524','3204');

INSERT INTO item (number ,name, ean, price) VALUES ('55','Fractal Design Define 7 XL Big Tower Sort','5986527745658','8565');

INSERT INTO item (number ,name, ean, price) VALUES ('56','PC i deler - AMD Ryzen 7 3700X','7359846389883','15996');

INSERT INTO item (number ,name, ean, price) VALUES ('57','PC i deler - Pro Gamer RTX 2060','9744599958565','15054');

INSERT INTO item (number ,name, ean, price) VALUES ('58','Corsair Crystal 570X RGB Midi Tower Sort','2571939281658','17875');

INSERT INTO item (number ,name, ean, price) VALUES ('59','ASUS ROG Strix B460-F GAMING hovedkort','4115648822147','2896');

INSERT INTO item (number ,name, ean, price) VALUES ('60','Gigabyte B450 AORUS ELITE, Socket-AM4','9868239578761','10926');

INSERT INTO item (number ,name, ean, price) VALUES ('61','Corsair SF600 PSU, SFX','8486617541576','8804');

INSERT INTO item (number ,name, ean, price) VALUES ('62','Corsair Vengeance RGB PRO DDR4 2666MHz 16GB','6624864881885','9940');

INSERT INTO item (number ,name, ean, price) VALUES ('63','HyperX Fury RGB DDR4 2666MHz 32GB','1824417219348','17510');

INSERT INTO item (number ,name, ean, price) VALUES ('64','iiglo M610 Trådløs Ergo Mus Sort','2263991952676','9974');

INSERT INTO item (number ,name, ean, price) VALUES ('65','Razer Goliathus Speed Cosmic Musematte','6966152345635','16249');

INSERT INTO item (number ,name, ean, price) VALUES ('66','GUNNAR Optiks Carrying Case','7329982571378','17834');

INSERT INTO item (number ,name, ean, price) VALUES ('67','APC Overspenningsvern','4232171112199','12512');

INSERT INTO item (number ,name, ean, price) VALUES ('68','Beyerdynamic Team Tygr Streaming pakke','2419323595813','5707');

INSERT INTO item (number ,name, ean, price) VALUES ('69','Logitech G432 Gaming Headset','5315353898969','17867');

INSERT INTO item (number ,name, ean, price) VALUES ('70','3Dconnexion Spacemouse Enterprise Pakke','8928849346933','10701');

INSERT INTO item (number ,name, ean, price) VALUES ('71','Razer BlackWidow Elite Gaming Tastatur','3372797682475','11929');

INSERT INTO item (number ,name, ean, price) VALUES ('72','BlueWalker PowerWalker UPS VFI 1000 TG','9277525725218','19797');

INSERT INTO item (number ,name, ean, price) VALUES ('73','Samsung 49" LED C49J890','9487712547951','7354');

INSERT INTO item (number ,name, ean, price) VALUES ('74','Acer 25" gamingskjerm Predator XB253QGX','8597488689519','8729');

INSERT INTO item (number ,name, ean, price) VALUES ('75','Acer 49" 4K skjerm EB490QK','1811129148936','18798');

INSERT INTO item (number ,name, ean, price) VALUES ('76','Microsoft Windows 10 Home �?? Download','7293261682691','1555');

INSERT INTO item (number ,name, ean, price) VALUES ('77','Epson Ecotank ET-7700','4468165911113','6953');

INSERT INTO item (number ,name, ean, price) VALUES ('78','Brother ADS2700W','1259615216438','3128');

INSERT INTO item (number ,name, ean, price) VALUES ('79','Wacom Cintiq 22','7558265922569','13798');

INSERT INTO item (number ,name, ean, price) VALUES ('80','Wacom One 13 Pen Display','4786798393335','9331');

```sql
INSERT INTO location (location_id, item_number, available_quantity, total_quantity)
VALUES ('1F-12-1-02','1','100','100');
INSERT INTO location (location_id, item_number, available_quantity, total_quantity)
VALUES ('2D-6-1-02','2','100','100');
INSERT INTO location (location_id, item_number, available_quantity, total_quantity)
VALUES ('2E-12-1-03','3','100','100');
INSERT INTO location (location_id, item_number, available_quantity, total_quantity)
VALUES ('2D-10-1-01','4','100','100');
INSERT INTO location (location_id, item_number, available_quantity, total_quantity)
VALUES ('2D-1-1-01','5','100','100');
INSERT INTO location (location_id, item_number, available_quantity, total_quantity)
VALUES ('1C-2-1-01','6','100','100');
INSERT INTO location (location_id, item_number, available_quantity, total_quantity)
VALUES ('1A-10-1-01','7','100','100');
INSERT INTO location (location_id, item_number, available_quantity, total_quantity)
VALUES ('1B-7-1-01','8','100','100');
INSERT INTO location (location_id, item_number, available_quantity, total_quantity)
VALUES ('1D-4-1-02','9','100','100');
INSERT INTO location (location_id, item_number, available_quantity, total_quantity)
VALUES ('1A-13-1-03','10','100','100');
INSERT INTO location (location_id, item_number, available_quantity, total_quantity)
VALUES ('1A-9-1-03','11','100','100');
INSERT INTO location (location_id, item_number, available_quantity, total_quantity)
VALUES ('1B-10-1-01','12','100','100');
INSERT INTO location (location_id, item_number, available_quantity, total_quantity)
VALUES ('3A-9-1-03','13','100','100');
INSERT INTO location (location_id, item_number, available_quantity, total_quantity)
VALUES ('2E-8-1-01','14','100','100');
INSERT INTO location (location_id, item_number, available_quantity, total_quantity)
VALUES ('2D-15-1-03','15','100','100');
INSERT INTO location (location_id, item_number, available_quantity, total_quantity)
VALUES ('1B-14-1-02','16','100','100');
INSERT INTO location (location_id, item_number, available_quantity, total_quantity)
VALUES ('1B-8-1-02','17','100','100');
INSERT INTO location (location_id, item_number, available_quantity, total_quantity)
VALUES ('1E-2-1-02','18','100','100');
INSERT INTO location (location_id, item_number, available_quantity, total_quantity)
VALUES ('1F-1-1-03','19','100','100');
```

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INSERT INTO location (location_id, item_number, available_quantity, total_quantity)
VALUES ('1B-1-1-01','20','100','100');
INSERT INTO location (location_id, item_number, available_quantity, total_quantity)
VALUES ('2A-13-1-02','21','100','100');
INSERT INTO location (location_id, item_number, available_quantity, total_quantity)
VALUES ('2F-4-1-03','22','100','100');
INSERT INTO location (location_id, item_number, available_quantity, total_quantity)
VALUES ('1E-12-1-01','23','100','100');
INSERT INTO location (location_id, item_number, available_quantity, total_quantity)
VALUES ('2E-1-1-01','24','100','100');
INSERT INTO location (location_id, item_number, available_quantity, total_quantity)
VALUES ('2A-10-1-02','25','100','100');
INSERT INTO location (location_id, item_number, available_quantity, total_quantity)
VALUES ('1B-15-1-02','26','100','100');
INSERT INTO location (location_id, item_number, available_quantity, total_quantity)
VALUES ('1B-4-1-02','27','100','100');
INSERT INTO location (location_id, item_number, available_quantity, total_quantity)
VALUES ('1B-13-1-03','28','100','100');
INSERT INTO location (location_id, item_number, available_quantity, total_quantity)
VALUES ('2F-5-1-01','29','100','100');
INSERT INTO location (location_id, item_number, available_quantity, total_quantity)
VALUES ('1B-9-1-02','30','100','100');
INSERT INTO location (location_id, item_number, available_quantity, total_quantity)
VALUES ('2C-2-1-01','31','100','100');
INSERT INTO location (location_id, item_number, available_quantity, total_quantity)
VALUES ('2F-3-1-02','32','100','100');
INSERT INTO location (location_id, item_number, available_quantity, total_quantity)
VALUES ('1B-2-1-01','33','100','100');
INSERT INTO location (location_id, item_number, available_quantity, total_quantity)
VALUES ('2E-11-1-02','34','100','100');
INSERT INTO location (location_id, item_number, available_quantity, total_quantity)
VALUES ('1C-15-1-01','35','100','100');
INSERT INTO location (location_id, item_number, available_quantity, total_quantity)
VALUES ('2E-3-1-01','36','100','100');
INSERT INTO location (location_id, item_number, available_quantity, total_quantity)
VALUES ('2F-2-1-01','37','100','100');
INSERT INTO location (location_id, item_number, available_quantity, total_quantity)
VALUES ('2A-1-1-01','38','100','100');
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INSERT INTO location (location_id, item_number, available_quantity, total_quantity)
VALUES ('1A-3-1-01','39','100','100');
INSERT INTO location (location_id, item_number, available_quantity, total_quantity)
VALUES ('1E-5-1-02','40','100','100');
INSERT INTO location (location_id, item_number, available_quantity, total_quantity)
VALUES ('1D-7-1-01','41','100','100');
INSERT INTO location (location_id, item_number, available_quantity, total_quantity)
VALUES ('1E-8-1-01','42','100','100');
INSERT INTO location (location_id, item_number, available_quantity, total_quantity)
VALUES ('1D-9-1-02','43','100','100');
INSERT INTO location (location_id, item_number, available_quantity, total_quantity)
VALUES ('3F-12-1-02','44','100','100');
INSERT INTO location (location_id, item_number, available_quantity, total_quantity)
VALUES ('1E-3-1-03','45','100','100');
INSERT INTO location (location_id, item_number, available_quantity, total_quantity)
VALUES ('2F-2-1-02','46','100','100');
INSERT INTO location (location_id, item_number, available_quantity, total_quantity)
VALUES ('2F-11-1-02','47','100','100');
INSERT INTO location (location_id, item_number, available_quantity, total_quantity)
VALUES ('2A-13-1-03','48','100','100');
INSERT INTO location (location_id, item_number, available_quantity, total_quantity)
VALUES ('1F-8-1-01','49','100','100');
INSERT INTO location (location_id, item_number, available_quantity, total_quantity)
VALUES ('2F-13-1-01','50','100','100');
INSERT INTO location (location_id, item_number, available_quantity, total_quantity)
VALUES ('2E-15-1-03','51','100','100');
INSERT INTO location (location_id, item_number, available_quantity, total_quantity)
VALUES ('1C-3-1-01','52','100','100');
INSERT INTO location (location_id, item_number, available_quantity, total_quantity)
VALUES ('1A-2-1-01','53','100','100');
INSERT INTO location (location_id, item_number, available_quantity, total_quantity)
VALUES ('2C-4-1-02','54','100','100');
INSERT INTO location (location_id, item_number, available_quantity, total_quantity)
VALUES ('2D-12-1-02','55','100','100');
INSERT INTO location (location_id, item_number, available_quantity, total_quantity)
VALUES ('2A-7-1-03','56','100','100');
INSERT INTO location (location_id, item_number, available_quantity, total_quantity)
VALUES ('1B-7-1-03','57','100','100');
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INSERT INTO location (location_id, item_number, available_quantity, total_quantity)
VALUES ('2D-14-1-03','58','100','100');
INSERT INTO location (location_id, item_number, available_quantity, total_quantity)
VALUES ('3E-5-1-02','59','100','100');
INSERT INTO location (location_id, item_number, available_quantity, total_quantity)
VALUES ('2E-5-1-02','60','100','100');
INSERT INTO location (location_id, item_number, available_quantity, total_quantity)
VALUES ('1E-13-1-03','61','100','100');
INSERT INTO location (location_id, item_number, available_quantity, total_quantity)
VALUES ('1E-15-1-01','62','100','100');
INSERT INTO location (location_id, item_number, available_quantity, total_quantity)
VALUES ('1A-15-1-03','63','100','100');
INSERT INTO location (location_id, item_number, available_quantity, total_quantity)
VALUES ('1E-10-1-01','64','100','100');
INSERT INTO location (location_id, item_number, available_quantity, total_quantity)
VALUES ('1B-11-1-02','65','100','100');
INSERT INTO location (location_id, item_number, available_quantity, total_quantity)
VALUES ('2A-6-1-02','66','100','100');
INSERT INTO location (location_id, item_number, available_quantity, total_quantity)
VALUES ('2E-6-1-01','67','100','100');
INSERT INTO location (location_id, item_number, available_quantity, total_quantity)
VALUES ('2A-14-1-02','68','100','100');
INSERT INTO location (location_id, item_number, available_quantity, total_quantity)
VALUES ('1E-4-1-02','69','100','100');
INSERT INTO location (location_id, item_number, available_quantity, total_quantity)
VALUES ('1C-11-1-03','70','100','100');
INSERT INTO location (location_id, item_number, available_quantity, total_quantity)
VALUES ('3C-3-1-01','71','100','100');
INSERT INTO location (location_id, item_number, available_quantity, total_quantity)
VALUES ('2A-2-1-01','72','100','100');
INSERT INTO location (location_id, item_number, available_quantity, total_quantity)
VALUES ('3B-8-1-02','73','100','100');
INSERT INTO location (location_id, item_number, available_quantity, total_quantity)
VALUES ('2B-13-1-01','74','100','100');
INSERT INTO location (location_id, item_number, available_quantity, total_quantity)
VALUES ('2A-7-1-02','75','100','100');
INSERT INTO location (location_id, item_number, available_quantity, total_quantity)
VALUES ('3A-13-1-02','76','100','100');
```

```sql
INSERT INTO location (location_id, item_number, available_quantity, total_quantity)
VALUES ('1F-2-1-03','77','100','100');
INSERT INTO location (location_id, item_number, available_quantity, total_quantity)
VALUES ('2B-13-1-03','78','100','100');
INSERT INTO location (location_id, item_number, available_quantity, total_quantity)
VALUES ('1A-11-1-01','79','100','100');
INSERT INTO location (location_id, item_number, available_quantity, total_quantity)
VALUES ('1B-9-1-03','80','100','100');
INSERT INTO logistics_user (id, first_name, last_name, email, password, printer)
VALUES ('hkom', 'Hans Kristian', 'Markeseth', 'hanskristianom@gmail.com', '123456',
'print1');
INSERT INTO logistics_user (id, first_name, last_name, email, password, printer)
VALUES ('crtv', 'Christopher', 'Tveråen', 'christopher.tveråen@gmail.com', '123456',
'print2');
INSERT INTO logistics_user (id, first_name, last_name, email, password, printer)
VALUES ('maha', 'Marthin', 'Hauge', 'marthin.hauge@gmail.com', '123456', 'print3');

INSERT INTO shipment (number, short_description) VALUES (1, 'PUP Sandefjord');
INSERT INTO shipment (number, short_description) VALUES (2, 'PostNord');
INSERT INTO shipment (number, short_description) VALUES (3, 'Posten');
INSERT INTO shipment (number, short_description) VALUES (4, 'PUP Oslo');
INSERT INTO shipment (number, short_description) VALUES (5, 'PostNord SE');
INSERT INTO shipment (number, short_description) VALUES (6, 'PostNord DK');
INSERT INTO shipment (number, short_description) VALUES (7, 'Porterbuddy');

INSERT INTO `order` (commerce_user, logistics_user, location, shipment, date, time,
status, item, quantity, price) VALUES ('64','hkom','1F-12-1-02','4','2020-7-
29','16:04:21','0','1','4','0');
INSERT INTO `order` (commerce_user, logistics_user, location, shipment, date, time,
status, item, quantity, price) VALUES ('31','crtv','2D-6-1-02','4','2020-1-
4','10:01:21','0','2','6','0');
INSERT INTO `order` (commerce_user, logistics_user, location, shipment, date, time,
status, item, quantity, price) VALUES ('47','hkom','2E-12-1-03','5','2020-4-
1','13:32:22','0','3','5','0');
INSERT INTO `order` (commerce_user, logistics_user, location, shipment, date, time,
status, item, quantity, price) VALUES ('14','hkom','2D-10-1-01','5','2020-6-
16','11:47:48','0','4','8','0');
```

INSERT INTO `order` (commerce_user, logistics_user, location, shipment, date, time, status, item, quantity, price) VALUES ('16','hkom','2D-1-1-01','2','2020-10-8','12:07:12','0','5','5','0');
INSERT INTO `order` (commerce_user, logistics_user, location, shipment, date, time, status, item, quantity, price) VALUES ('73','crtv','1C-2-1-01','4','2020-8-11','10:42:33','0','6','1','0');
INSERT INTO `order` (commerce_user, logistics_user, location, shipment, date, time, status, item, quantity, price) VALUES ('10','hkom','1A-10-1-01','6','2020-7-26','11:46:24','0','7','2','0');
INSERT INTO `order` (commerce_user, logistics_user, location, shipment, date, time, status, item, quantity, price) VALUES ('26','crtv','1B-7-1-01','6','2020-2-16','10:28:05','0','8','3','0');
INSERT INTO `order` (commerce_user, logistics_user, location, shipment, date, time, status, item, quantity, price) VALUES ('39','crtv','1D-4-1-02','3','2020-4-10','18:10:23','0','9','7','0');
INSERT INTO `order` (commerce_user, logistics_user, location, shipment, date, time, status, item, quantity, price) VALUES ('19','hkom','1A-13-1-03','6','2020-7-23','10:17:17','0','10','3','0');
INSERT INTO `order` (commerce_user, logistics_user, location, shipment, date, time, status, item, quantity, price) VALUES ('72','crtv','1A-9-1-03','3','2020-1-15','12:43:04','0','11','2','0');
INSERT INTO `order` (commerce_user, logistics_user, location, shipment, date, time, status, item, quantity, price) VALUES ('27','hkom','1B-10-1-01','5','2020-4-14','10:47:36','0','12','7','0');
INSERT INTO `order` (commerce_user, logistics_user, location, shipment, date, time, status, item, quantity, price) VALUES ('73','hkom','3A-9-1-03','5','2020-5-26','15:01:36','0','13','8','0');
INSERT INTO `order` (commerce_user, logistics_user, location, shipment, date, time, status, item, quantity, price) VALUES ('28','hkom','2E-8-1-01','4','2020-10-19','11:11:07','0','14','1','0');
INSERT INTO `order` (commerce_user, logistics_user, location, shipment, date, time, status, item, quantity, price) VALUES ('14','hkom','2D-15-1-03','2','2020-4-26','14:02:31','0','15','3','0');
INSERT INTO `order` (commerce_user, logistics_user, location, shipment, date, time, status, item, quantity, price) VALUES ('16','crtv','1B-14-1-02','6','2020-10-27','13:33:48','0','16','6','0');

```sql
INSERT INTO `order` (commerce_user, logistics_user, location, shipment, date, time, status, item, quantity, price) VALUES ('29','hkom','1B-8-1-02','6','2020-9-3','11:20:06','0','17','4','0');
INSERT INTO `order` (commerce_user, logistics_user, location, shipment, date, time, status, item, quantity, price) VALUES ('70','hkom','1E-2-1-02','6','2020-7-19','13:08:23','0','18','3','0');
INSERT INTO `order` (commerce_user, logistics_user, location, shipment, date, time, status, item, quantity, price) VALUES ('7','hkom','1F-1-1-03','4','2020-10-25','11:48:37','0','19','6','0');
INSERT INTO `order` (commerce_user, logistics_user, location, shipment, date, time, status, item, quantity, price) VALUES ('43','crtv','1B-1-1-01','2','2020-11-28','10:21:44','0','20','8','0');
INSERT INTO `order` (commerce_user, logistics_user, location, shipment, date, time, status, item, quantity, price) VALUES ('79','crtv','2A-13-1-02','4','2020-3-5','14:42:38','0','21','5','0');
INSERT INTO `order` (commerce_user, logistics_user, location, shipment, date, time, status, item, quantity, price) VALUES ('40','crtv','2F-4-1-03','5','2020-7-6','16:46:17','0','22','2','0');
INSERT INTO `order` (commerce_user, logistics_user, location, shipment, date, time, status, item, quantity, price) VALUES ('51','crtv','1E-12-1-01','5','2020-7-12','11:20:21','0','23','1','0');
INSERT INTO `order` (commerce_user, logistics_user, location, shipment, date, time, status, item, quantity, price) VALUES ('32','hkom','2E-1-1-01','4','2020-1-21','12:33:21','0','24','4','0');
INSERT INTO `order` (commerce_user, logistics_user, location, shipment, date, time, status, item, quantity, price) VALUES ('48','hkom','2A-10-1-02','3','2020-10-15','12:18:04','0','25','2','0');
INSERT INTO `order` (commerce_user, logistics_user, location, shipment, date, time, status, item, quantity, price) VALUES ('64','crtv','1B-15-1-02','6','2020-10-8','11:35:25','0','26','7','0');
INSERT INTO `order` (commerce_user, logistics_user, location, shipment, date, time, status, item, quantity, price) VALUES ('53','hkom','1B-4-1-02','5','2020-5-13','14:20:30','0','27','9','0');
INSERT INTO `order` (commerce_user, logistics_user, location, shipment, date, time, status, item, quantity, price) VALUES ('16','hkom','1B-13-1-03','4','2020-1-25','11:41:06','0','28','6','0');
```

```sql
INSERT INTO `order` (commerce_user, logistics_user, location, shipment, date, time, status, item, quantity, price) VALUES ('58','hkom','2F-5-1-01','2','2020-10-20','14:43:45','0','29','7','0');
INSERT INTO `order` (commerce_user, logistics_user, location, shipment, date, time, status, item, quantity, price) VALUES ('34','hkom','1B-9-1-02','5','2020-8-17','16:17:48','0','30','2','0');
INSERT INTO `order` (commerce_user, logistics_user, location, shipment, date, time, status, item, quantity, price) VALUES ('73','crtv','2C-2-1-01','5','2020-8-11','15:23:18','0','31','6','0');
INSERT INTO `order` (commerce_user, logistics_user, location, shipment, date, time, status, item, quantity, price) VALUES ('3','hkom','2F-3-1-02','2','2020-8-13','14:12:35','0','32','5','0');
INSERT INTO `order` (commerce_user, logistics_user, location, shipment, date, time, status, item, quantity, price) VALUES ('57','crtv','1B-2-1-01','2','2020-10-11','17:45:33','0','33','3','0');
INSERT INTO `order` (commerce_user, logistics_user, location, shipment, date, time, status, item, quantity, price) VALUES ('35','hkom','2E-11-1-02','6','2020-5-28','17:04:32','0','34','9','0');
INSERT INTO `order` (commerce_user, logistics_user, location, shipment, date, time, status, item, quantity, price) VALUES ('14','crtv','1C-15-1-01','4','2020-3-19','17:08:31','0','35','9','0');
INSERT INTO `order` (commerce_user, logistics_user, location, shipment, date, time, status, item, quantity, price) VALUES ('21','crtv','2E-3-1-01','2','2020-4-5','13:45:43','0','36','3','0');
INSERT INTO `order` (commerce_user, logistics_user, location, shipment, date, time, status, item, quantity, price) VALUES ('42','hkom','2F-2-1-01','6','2020-1-25','11:35:06','0','37','5','0');
INSERT INTO `order` (commerce_user, logistics_user, location, shipment, date, time, status, item, quantity, price) VALUES ('19','hkom','2A-1-1-01','4','2020-6-18','13:14:07','0','38','1','0');
INSERT INTO `order` (commerce_user, logistics_user, location, shipment, date, time, status, item, quantity, price) VALUES ('13','crtv','1A-3-1-01','4','2020-10-25','13:23:44','0','39','3','0');
INSERT INTO `order` (commerce_user, logistics_user, location, shipment, date, time, status, item, quantity, price) VALUES ('67','crtv','1E-5-1-02','4','2020-6-14','10:24:11','0','40','8','0');
```

INSERT INTO `order` (commerce_user, logistics_user, location, shipment, date, time, status, item, quantity, price) VALUES ('49','hkom','1D-7-1-01','6','2020-6-2','16:01:22','0','41','8','0');

INSERT INTO `order` (commerce_user, logistics_user, location, shipment, date, time, status, item, quantity, price) VALUES ('55','hkom','1E-8-1-01','3','2020-6-23','14:28:15','0','42','2','0');

INSERT INTO `order` (commerce_user, logistics_user, location, shipment, date, time, status, item, quantity, price) VALUES ('79','hkom','1D-9-1-02','1','2020-7-14','15:07:07','0','43','3','0');

INSERT INTO `order` (commerce_user, logistics_user, location, shipment, date, time, status, item, quantity, price) VALUES ('25','hkom','3F-12-1-02','5','2020-11-2','14:11:35','0','44','6','0');

INSERT INTO `order` (commerce_user, logistics_user, location, shipment, date, time, status, item, quantity, price) VALUES ('69','hkom','1E-3-1-03','1','2020-7-10','14:48:21','0','45','5','0');

INSERT INTO `order` (commerce_user, logistics_user, location, shipment, date, time, status, item, quantity, price) VALUES ('36','hkom','2F-2-1-02','4','2020-7-15','12:11:25','0','46','7','0');

INSERT INTO `order` (commerce_user, logistics_user, location, shipment, date, time, status, item, quantity, price) VALUES ('5','crtv','2F-11-1-02','2','2020-7-10','12:11:37','0','47','1','0');

INSERT INTO `order` (commerce_user, logistics_user, location, shipment, date, time, status, item, quantity, price) VALUES ('48','crtv','2A-13-1-03','4','2020-11-22','16:40:42','0','48','4','0');

INSERT INTO `order` (commerce_user, logistics_user, location, shipment, date, time, status, item, quantity, price) VALUES ('23','crtv','1F-8-1-01','4','2020-7-21','18:20:33','0','49','3','0');

INSERT INTO `order` (commerce_user, logistics_user, location, shipment, date, time, status, item, quantity, price) VALUES ('39','crtv','2F-13-1-01','2','2020-7-21','11:31:20','0','50','8','0');

INSERT INTO `order` (commerce_user, logistics_user, location, shipment, date, time, status, item, quantity, price) VALUES ('12','hkom','2E-15-1-03','2','2020-6-8','13:31:44','0','51','2','0');

INSERT INTO `order` (commerce_user, logistics_user, location, shipment, date, time, status, item, quantity, price) VALUES ('76','hkom','1C-3-1-01','2','2020-2-19','13:44:03','0','52','7','0');

INSERT INTO `order` (commerce_user, logistics_user, location, shipment, date, time, status, item, quantity, price) VALUES ('73','hkom','1A-2-1-01','2','2020-7-25','17:38:35','0','53','8','0');
INSERT INTO `order` (commerce_user, logistics_user, location, shipment, date, time, status, item, quantity, price) VALUES ('42','hkom','2C-4-1-02','4','2020-8-5','15:06:31','0','54','6','0');
INSERT INTO `order` (commerce_user, logistics_user, location, shipment, date, time, status, item, quantity, price) VALUES ('34','hkom','2D-12-1-02','4','2020-9-23','13:12:44','0','55','2','0');
INSERT INTO `order` (commerce_user, logistics_user, location, shipment, date, time, status, item, quantity, price) VALUES ('10','hkom','2A-7-1-03','1','2020-1-21','18:06:42','0','56','2','0');
INSERT INTO `order` (commerce_user, logistics_user, location, shipment, date, time, status, item, quantity, price) VALUES ('63','hkom','1B-7-1-03','3','2020-1-17','16:20:13','0','57','5','0');
INSERT INTO `order` (commerce_user, logistics_user, location, shipment, date, time, status, item, quantity, price) VALUES ('28','crtv','2D-14-1-03','5','2020-8-16','10:26:35','0','58','3','0');
INSERT INTO `order` (commerce_user, logistics_user, location, shipment, date, time, status, item, quantity, price) VALUES ('47','crtv','3E-5-1-02','1','2020-5-19','11:22:00','0','59','1','0');
INSERT INTO `order` (commerce_user, logistics_user, location, shipment, date, time, status, item, quantity, price) VALUES ('62','hkom','2E-5-1-02','6','2020-6-16','18:31:43','0','60','8','0');
INSERT INTO `order` (commerce_user, logistics_user, location, shipment, date, time, status, item, quantity, price) VALUES ('5','hkom','1E-13-1-03','2','2020-11-11','12:18:45','0','61','4','0');
INSERT INTO `order` (commerce_user, logistics_user, location, shipment, date, time, status, item, quantity, price) VALUES ('59','hkom','1E-15-1-01','2','2020-5-1','16:38:06','0','62','2','0');
INSERT INTO `order` (commerce_user, logistics_user, location, shipment, date, time, status, item, quantity, price) VALUES ('41','hkom','1A-15-1-03','6','2020-9-21','10:42:10','0','63','4','0');
INSERT INTO `order` (commerce_user, logistics_user, location, shipment, date, time, status, item, quantity, price) VALUES ('1','crtv','1E-10-1-01','4','2020-7-26','15:31:41','0','64','9','0');

INSERT INTO `order` (commerce_user, logistics_user, location, shipment, date, time, status, item, quantity, price) VALUES ('20','hkom','1B-11-1-02','4','2020-5-2','10:32:45','0','65','2','0');
INSERT INTO `order` (commerce_user, logistics_user, location, shipment, date, time, status, item, quantity, price) VALUES ('18','hkom','2A-6-1-02','6','2020-3-22','15:43:13','0','66','2','0');
INSERT INTO `order` (commerce_user, logistics_user, location, shipment, date, time, status, item, quantity, price) VALUES ('66','crtv','2E-6-1-01','5','2020-3-18','10:46:26','0','67','9','0');
INSERT INTO `order` (commerce_user, logistics_user, location, shipment, date, time, status, item, quantity, price) VALUES ('55','hkom','2A-14-1-02','4','2020-8-21','11:30:08','0','68','6','0');
INSERT INTO `order` (commerce_user, logistics_user, location, shipment, date, time, status, item, quantity, price) VALUES ('40','crtv','1E-4-1-02','3','2020-8-14','15:01:25','0','69','5','0');
INSERT INTO `order` (commerce_user, logistics_user, location, shipment, date, time, status, item, quantity, price) VALUES ('70','hkom','1C-11-1-03','4','2020-8-15','15:00:32','0','70','9','0');
INSERT INTO `order` (commerce_user, logistics_user, location, shipment, date, time, status, item, quantity, price) VALUES ('73','hkom','3C-3-1-01','6','2020-1-15','10:22:00','0','71','9','0');
INSERT INTO `order` (commerce_user, logistics_user, location, shipment, date, time, status, item, quantity, price) VALUES ('37','hkom','2A-2-1-01','4','2020-1-22','11:12:36','0','72','6','0');
INSERT INTO `order` (commerce_user, logistics_user, location, shipment, date, time, status, item, quantity, price) VALUES ('65','crtv','3B-8-1-02','2','2020-7-18','12:21:42','0','73','4','0');
INSERT INTO `order` (commerce_user, logistics_user, location, shipment, date, time, status, item, quantity, price) VALUES ('3','crtv','2B-13-1-01','4','2020-7-17','14:32:17','0','74','1','0');
INSERT INTO `order` (commerce_user, logistics_user, location, shipment, date, time, status, item, quantity, price) VALUES ('13','hkom','2A-7-1-02','5','2020-8-13','18:34:17','0','75','7','0');
INSERT INTO `order` (commerce_user, logistics_user, location, shipment, date, time, status, item, quantity, price) VALUES ('52','hkom','3A-13-1-02','3','2020-8-6','12:05:25','0','76','5','0');

```sql
INSERT INTO `order` (commerce_user, logistics_user, location, shipment, date, time, status, item, quantity, price) VALUES ('10','hkom','1F-2-1-03','6','2020-9-10','10:05:08','0','77','2','0');
INSERT INTO `order` (commerce_user, logistics_user, location, shipment, date, time, status, item, quantity, price) VALUES ('3','crtv','2B-13-1-03','3','2020-8-12','17:14:04','0','78','6','0');
INSERT INTO `order` (commerce_user, logistics_user, location, shipment, date, time, status, item, quantity, price) VALUES ('36','hkom','1A-11-1-01','3','2020-7-14','11:45:03','0','79','6','0');
INSERT INTO `order` (commerce_user, logistics_user, location, shipment, date, time, status, item, quantity, price) VALUES ('74','crtv','1B-9-1-03','3','2020-9-2','17:41:03','0','80','5','0');
```

Definer rutiner og triggere

```sql
DELIMITER //
CREATE TRIGGER on_order
    BEFORE INSERT ON `order` FOR EACH ROW
    BEGIN
        UPDATE location SET available_quantity = (available_quantity - NEW.quantity)
WHERE location_id = NEW.location;
    end //
DELIMITER ;


DELIMITER //
CREATE TRIGGER log_update_order
    BEFORE UPDATE ON `order`
    FOR EACH ROW
    INSERT INTO order_history SET sales_order = OLD.sales_order,
                        commerce_user = OLD.commerce_user,
                        logistics_user = OLD.logistics_user,
                        location = OLD.location,
                        shipment = OLD.shipment,
                        date = OLD.date,
                        time = OLD.time,
                        status = OLD.status,
                        item = OLD.item,
                        quantity = OLD.quantity,
```

```sql
                                price = OLD.price,
                                action = 'UPDATE',
                                change_time = NOW();
DELIMITER ;


DELIMITER //
CREATE TRIGGER log_delete_order
    BEFORE DELETE ON `order`
    FOR EACH ROW
    INSERT INTO order_history SET sales_order = OLD.sales_order,
                                commerce_user = OLD.commerce_user,
                                logistics_user = OLD.logistics_user,
                                location = OLD.location,
                                shipment = OLD.shipment,
                                date = OLD.date,
                                time = OLD.time,
                                status = OLD.status,
                                item = OLD.item,
                                quantity = OLD.quantity,
                                price = OLD.price,
                                action = 'DELETE',
                                change_time = NOW();
DELIMITER ;


DELIMITER //
CREATE TRIGGER quantity_check
    BEFORE INSERT
    ON `order`
    FOR EACH ROW
BEGIN
    DECLARE item_quantity INT;
    SET item_quantity = (SELECT available_quantity FROM location WHERE location_id =
NEW.location);
    IF (item_quantity < NEW.quantity) THEN
        SIGNAL SQLSTATE '45000' SET MESSAGE_TEXT = 'The order can not be completed
as there are too few items available';
    END if;
end //
```

```sql
DELIMITER ;

DELIMITER //
CREATE PROCEDURE add_item (IN i_name varchar(64), i_ean bigint, i_price int,
l_location varchar(64), l_available_quantity int, l_total_quantity int)
    BEGIN
        INSERT INTO item (name, ean, price) VALUES (i_name, i_ean, i_price);
        SET @item_number = (SELECT number FROM item WHERE ean = i_ean);
        INSERT INTO location (location_id, item_number, available_quantity,
total_quantity) VALUES (l_location, @item_number, l_available_quantity,
l_total_quantity);
    end //
DELIMITER ;

DELIMITER //
CREATE PROCEDURE delete_order (IN o_sales INT)
    BEGIN
        DELETE FROM `order` WHERE sales_order = o_sales;
    end //
DELIMITER ;

DELIMITER //
CREATE PROCEDURE create_shipment (IN s_desc text)
    BEGIN
        SET @latest_shipment = (SELECT MAX(number) FROM shipment);
        INSERT INTO shipment VALUES ((@latest_shipment + 1), s_desc);
    end //
DELIMITER ;

DELIMITER //
CREATE TRIGGER price_order
    BEFORE INSERT ON `order` FOR EACH ROW
    BEGIN
        DECLARE latest_sale INT;
        SET latest_sale = (SELECT MAX(sales_order) FROM `order`);
        SET @price = (SELECT price FROM item WHERE number = NEW.item);
        SET NEW.price = (@price * NEW.quantity);
    end //
```

```
DELIMITER ;

DELIMITER //
CREATE FUNCTION most_expensive_order()
RETURNS INT
DETERMINISTIC
BEGIN
    DECLARE largestSum BIGINT;
    DECLARE most_expensive_order int;
    SET largestSum = (SELECT MAX(price) FROM `order`);
    SET most_expensive_order = (SELECT sales_order FROM `order` WHERE price =
largestSum);
    RETURN (most_expensive_order);
end //
DELIMITER ;

DELIMITER //
CREATE FUNCTION promised_income()
RETURNS BIGINT
DETERMINISTIC
BEGIN
    RETURN (SELECT SUM(price) FROM `order` WHERE status = 0);
end //

DELIMITER //
CREATE TRIGGER on_order_complete
    BEFORE UPDATE ON `order` FOR EACH ROW
    BEGIN
        IF(NEW.status = 1) THEN
        UPDATE location SET total_quantity = (total_quantity - NEW.quantity) WHERE
location_id = NEW.location OR location_id = OLD.location;
        END IF;
    end //
DELIMITER ;
```

Tester lagrede rutiner og triggere i databasen

CALL add_item('TestItem', '1234567896593', '1000', '5F-12-1-01', '100', '100');

CALL create_shipment('porterbuddy');

CALL delete_order(1);

CALL most_expensive_order();

SELECT * FROM `order` WHERE sales_order = most_expensive_order();

SELECT promised_income() as "order_total";

Dette kjører de forskjellige lagrede rutinene vi har i databasen.

INSERT INTO `order` (commerce_user, logistics_user, location, shipment, date, time, status, item, quantity, price) VALUES ('64','hkom','1F-12-1-02','4','2020-10-23','16:04:21','0','1','4','0');

Dette vil kjøre trigger for å telle ned varer, som da holder en forretningsregler om databasen, siden vi kan ikke selge flere varer enn det vi har på lager. Den sjekker også om vi har nok varer på lager. Om vi ikke har det sender den en error melding.

Denne vil også kjøre price_order som er en trigger som regner ut den totale prisen på ordren basert på hvor mange av ordren man kjøper.

UPDATE `order` SET status = 1 WHERE sales_order = MAX(sales_order);

Dette vil kjøre trigger for å telle ned total_quantity og lagre den historiske dataen om ordren.

DELETE FROM `order` WHERE sales_order = (SELECT MAX(sales_order));

Dette vil kjøre triggeren som lagrer historiske data om sletting av ordre.