**Chapter 7 Practical Exercise**

**1.**

**a.**

CREATE VIEW MAINE\_TRIPS AS

SELECT TRIP\_ID, TRIP\_NAME, START\_LOCATION, DISTANCE, MAX\_GRP\_SIZE, TYPE, SEASON

FROM TRIP

WHERE STATE = 'ME';

Text

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**b.**

SELECT TRIP\_ID, TRIP\_NAME, DISTANCE

FROM MAINE\_TRIPS

WHERE TYPE = 'Biking';

**Background pattern

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**c.**

SELECT TRIP\_ID, TRIP\_NAME, DISTANCE

FROM TRIP

WHERE TYPE = 'Biking'

AND STATE = 'ME';

**Background pattern

Description automatically generated**

**d.**

**Updating this data through the view could cause a number of problems. If the TRIP table can accept nulls in all fields, it could be updated through the view but STATE will most likely be null if we INSERT through the view (because state isn’t present in the view). Also if we tried to insert a row through the view that already had a matching TRIP\_ID but a differing state in TRIP, the attempt would be rejected and could confuse the user of the view because that TRIP\_ID wasn’t pulled into the view. It seems like updating data through a view is generally a bad idea and could create bad data if the user is not careful.**

**2.**

**a.**

CREATE VIEW RESERVATION\_CUSTOMER AS

SELECT a.RESERVATION\_ID, a.TRIP\_ID, a.TRIP\_DATE, a.CUSTOMER\_NUM, b.LAST\_NAME, b.FIRST\_NAME, b.PHONE

FROM RESERVATION a, CUSTOMER b

WHERE a.CUSTOMER\_NUM = b.CUSTOMER\_NUM

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**b.**

SELECT RESERVATION\_ID, TRIP\_ID, TRIP\_DATE, CUSTOMER\_NUM, LAST\_NAME

FROM RESERVATION\_CUSTOMER

WHERE TRIP\_DATE = 'SEP-11-2016'

**A screenshot of a computer

Description automatically generated with medium confidence**

**c.**

SELECT RESERVATION\_ID, TRIP\_ID, TRIP\_DATE, a.CUSTOMER\_NUM, LAST\_NAME

FROM RESERVATION a

JOIN CUSTOMER b

ON a.customer\_num = b.customer\_num

WHERE TRIP\_DATE = 'SEP-11-2016'

**Graphical user interface, application, Teams

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**d.**

**Like in in the previous updating through this view would create issues. Updating through this view could actually create more issues than the previous problem because it is a join of two tables. Primarily if we added rows there would be a number of null fields in both base tables. If we deleted rows we could also run into issues since we use primary keys from both tables.**

**3.**

**a.**

CREATE VIEW TRIP\_INVENTORY (STATE, UNITS) AS

SELECT STATE, COUNT(\*)

FROM TRIP

GROUP BY STATE

ORDER BY STATE;

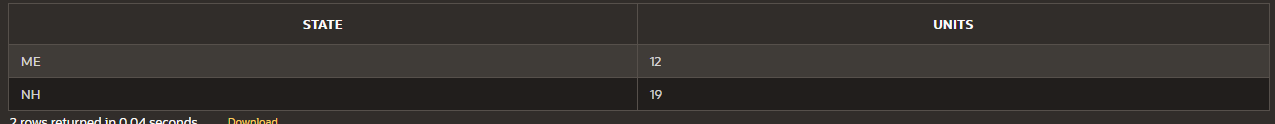
**Text

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**b.**

SELECT \* FROM TRIP\_INVENTORY

WHERE UNITS > 10;

****

**c.**

SELECT STATE, COUNT(\*) AS UNITS

FROM TRIP

GROUP BY STATE

HAVING COUNT(\*) > 10

ORDER BY STATE

****

**d.**

**Updating this view would be impossible, as one of our fields is a calculated column.**

**4.**

**a.**

GRANT SELECT ON TRIP TO RODRIQUEZ

**b.**

GRANT INSERT ON RESERVATION TO GOMEZ, LISTON;

GRANT INSERT ON CUSTOMER TO GOMEZ, LISTON;

**c.**

GRANT UPDATE (TRIP\_PRICE) ON RESERVATION TO ANDREWS, ZIMMER

**d.**

GRANT SELECT (TRIP\_NAME, START\_LOCATION, DISTANCE, TYPE) ON TRIP TO PUBLIC

**e.**

GRANT INSERT ON GUIDE TO GOLDEN

GRANT DELETE ON GUIDE TO GOLDEN

**f.**

GRANT INDEX ON TRIP TO ANDREWS

**g.**

GRANT ALTER ON CUSTOMER TO ANDREWS, GOLDEN

**h.**

GRANT ALL ON TRIP TO GOLDEN

GRANT ALL ON GUIDE TO GOLDEN

GRANT ALL ON TRIP\_GUIDES TO GOLDEN

**5.**

REVOKE ALL ON CUSTOMER FROM ANDREWS

REVOKE ALL ON TRIP FROM ANDREWS

REVOKE ALL ON RESERVATION FROM ANDREWS

**6.**

**a.**

CREATE INDEX TRIP\_INDEX1 ON TRIP(TRIP\_NAME)

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**b.**

CREATE INDEX TRIP\_INDEX2 ON TRIP(TYPE)

**Text

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**c.**

CREATE INDEX TRIP\_INDEX3 ON CUSTOMER(LAST\_NAME, FIRST\_NAME)

**Text

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**7.**

DROP INDEX TRIP\_INDEX3

**Text

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**8.**

**a.**

SELECT COLUMN\_NAME, DATA\_TYPE

FROM DBA\_TAB\_COLUMNS

WHERE TABLE\_NAME = 'GUIDE'

**b.**

SELECT TABLE\_NAME

FROM DBA\_TAB\_COLUMNS

WHERE COLUMN\_NAME = 'TRIP\_ID'

**c.**

SELECT TABLE\_NAME, COLUMN\_NAME, DATA\_TYPE

FROM DBA\_TAB\_COLUMNS

WHERE COLUMN\_NAME IN ('TRIP\_ID', 'TRIP\_ID', 'TYPE')

ORDER BY COLUMN\_NAME, TABLE\_NAME;

**9.**

ALTER TABLE RESERVATION

ADD FOREIGN KEY (CUSTOMER\_NUM) REFERENCES CUSTOMER

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**10.**

ALTER TABLE TRIP

ADD CHECK (TYPE IN ('Biking', 'Hiking', 'Paddling'))

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**11.**

**Source:**

[**https://www.w3schools.com/sql/sql\_ref\_check.asp**](https://www.w3schools.com/sql/sql_ref_check.asp)

ALTER TABLE TRIP

ADD CHECK (MAX\_GRP\_SIZE > 1)

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