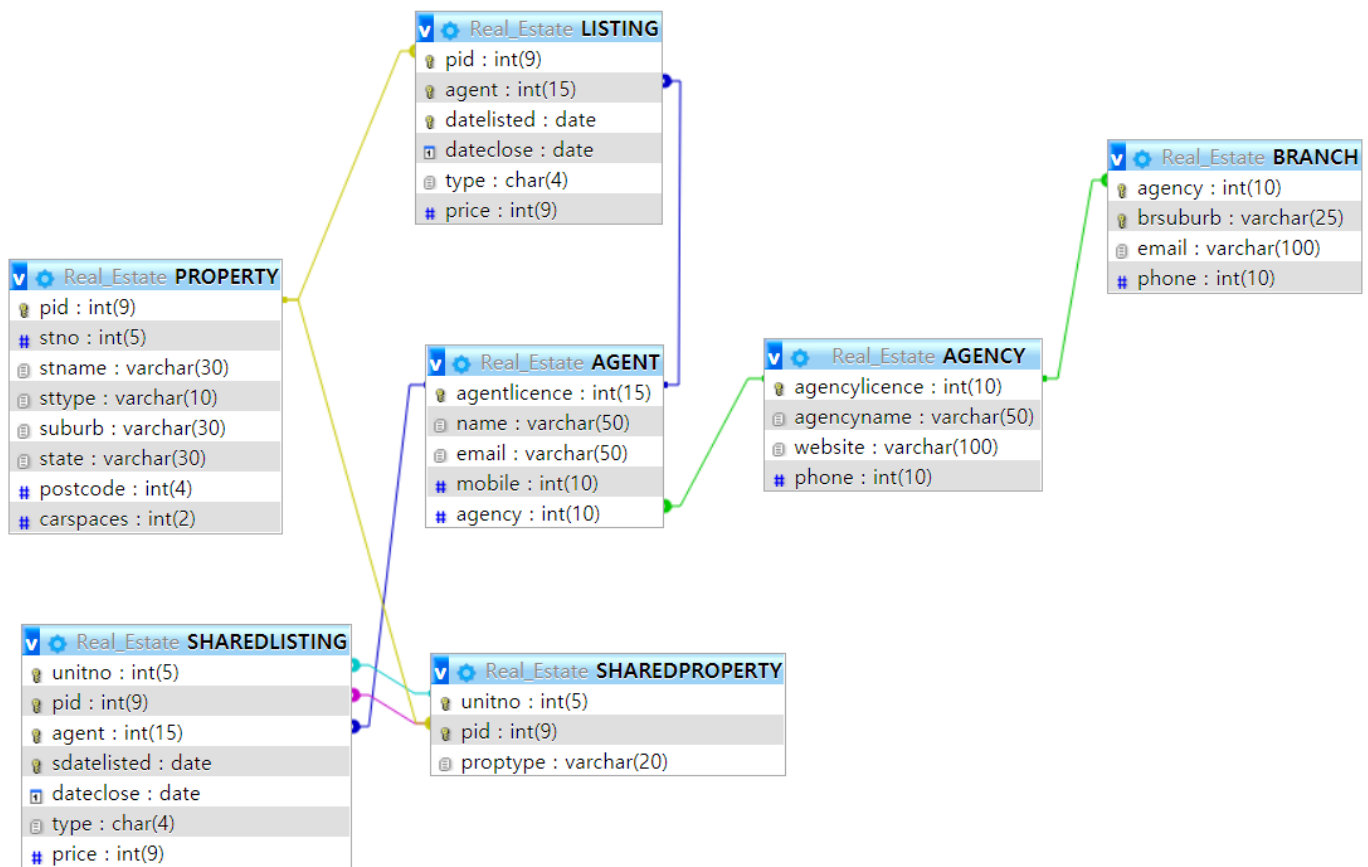


Assignment 2 Template

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Note: Please edit the name and student ID number to reflect your identity and do not modify the design and layout of the cover page (font, font size, spacing, etc.). Also, do not change the page layout in the given assignment template.

SCREENSHOT OF DESIGNER VIEW FROM PHPMYADMIN (You may put this in sideways if required)



Query 1: List all townhouses sold in the suburb Annandale in 2016

QUERY SQL

```
CREATE VIEW Townhouses_sold_in_2016_Annandale AS(
  SELECT S.unitno, S.pid
  FROM SHAREDPROPERTY AS S, PROPERTY AS P, SHAREDLISTING AS L
  WHERE S.pid = P.pid AND S.unitno = L.unitno AND suburb = "Annandale"
  AND dateclose BETWEEN "2016-01-01" AND "2016-12-31" AND proptype = "Townhouse" AND type = "Sale")
```

QUERY OUTPUT (SCREENSHOT)

unitno	pid
2	223413298
12	123456789
15	91323323
33	33345656

Query 2: Find the suburbs that have not had any sales since 2017

QUERY SQL

View 1.

```
CREATE VIEW All_suburb_with_properties_sold_since_2017 AS
SELECT DISTINCT suburb
FROM PROPERTY
WHERE pid IN (
    SELECT pid
    FROM LISTING
    WHERE type = "Sale" AND dateclose > "2016-12-31")

UNION ALL

SELECT DISTINCT suburb
FROM PROPERTY
WHERE pid IN (
    SELECT pid
    FROM SHAREDLISTING
    WHERE type = "Sale" AND dateclose > "2016-12-31")
,
```

View 2.

```
CREATE VIEW Suburb_that_have_not_had_sale_since_2017 AS (
SELECT DISTINCT suburb
FROM PROPERTY
WHERE suburb NOT IN (
    SELECT suburb
    FROM All_suburb_with_properties_sold_since_2017))
```

QUERY OUTPUT (SCREENSHOT)

View 1.

suburb
Annandale
Benowa

View 2.

suburb
Thomson
Cardio
Question
Cheque

Query 3: Find the total number of apartments available for rent on Parramatta Road

QUERY SQL

```
CREATE VIEW Apartments_aval_in_parramatta_rd AS (  
  SELECT COUNT(*)  
  FROM SHAREDPROPERTY AS S, PROPERTY AS P, SHAREDLISTING AS L  
  WHERE S.pid = P.pid AND S.unitno = L.unitno AND stname = "Parramatta" AND sttype = "Rd"  
  AND proptype = "Apartment" AND type = "Rent" AND dateclose IS NULL )
```

QUERY OUTPUT (SCREENSHOT)

COUNT(*)

4

Query 4: Which street in the suburb Camperdown has the highest average rent

QUERY SQL

View 1.

```
CREATE VIEW All_camperdown_rentals AS
SELECT stname, sttype, L.pid, price
FROM PROPERTY AS P, LISTING AS L
WHERE P.pid = L.pid AND suburb = "Camperdown" AND type = "Rent"

UNION ALL

SELECT stname, sttype, S.pid, price
FROM PROPERTY AS P, SHAREDLISTING AS S
WHERE P.pid = S.pid AND suburb = "Camperdown" AND type = "Rent"
```

View 2.

```
CREATE VIEW Street_with_highest_average_rent AS (
SELECT stname, sttype
FROM All_camperdown_rentals
GROUP BY stname, sttype
HAVING AVG(price) >= ALL(
SELECT AVG(price)
FROM All_camperdown_rentals
GROUP BY stname, sttype))
```

QUERY OUTPUT (SCREENSHOT)

View 1.

stname	sttype	pid	price
Downing	St	400000001	550
Morning	St	400000004	450
Turning	St	400000006	320
Downing	St	400000002	320
Downing	St	400000003	450
Morning	St	400000005	650
Turning	St	400000007	250

View 2.

stname	sttype
Morning	St

Query 5: What is the total value of properties sold by Poh Ling from Trusted Real Estate since 2014

QUERY SQL

View 1.

```
CREATE VIEW Prices_of_poh_ling_sales AS
SELECT SUM(price)
FROM SHAREDLISTING
WHERE dateclose > "2013-12-31" AND agent = (
    SELECT agentlicence
    FROM AGENT
    WHERE name = "Poh Ling" AND agency = (
        SELECT agencylicence
        FROM AGENCY
        WHERE agencyname = "Trusted Real Estate"))

UNION ALL

SELECT SUM(price)
FROM LISTING
WHERE dateclose > "2013-12-31" AND agent = (
    SELECT agentlicence
    FROM AGENT
    WHERE name = "Poh Ling" AND agency = (
        SELECT agencylicence
        FROM AGENCY
        WHERE agencyname = "Trusted Real Estate"))
```

View 2.

```
CREATE VIEW Total_value_sold_by_poh_ling AS (
    SELECT SUM(`SUM(price)`) AS TotalValue
    FROM Prices_of_poh_ling_sales)
```

QUERY OUTPUT (SCREENSHOT)

View 1.

SUM(price)
650000
3309997

View 2.

TotalValue
3959997

Query 6: Which suburb's properties have always been sold in less than 4 weeks

QUERY SQL

View 1.

```
CREATE VIEW All_suburb_with_properties_sold_over_4weeks AS
SELECT DISTINCT suburb
FROM PROPERTY
WHERE pid IN(
    SELECT pid
    FROM LISTING
    WHERE type = "Sale" AND DATEDIFF(dateclose, datelisted) > 28)

UNION ALL

SELECT DISTINCT suburb
FROM PROPERTY
WHERE pid IN(
    SELECT pid
    FROM SHAREDLISTING
    WHERE type = "Sale" AND DATEDIFF(dateclose, sdatelisted) > 28)
```

View 2.

```
CREATE VIEW Suburb_that_has_always_sold_under_4weeks AS(
SELECT DISTINCT suburb
FROM PROPERTY
WHERE suburb NOT IN (
    SELECT suburb
    FROM All_suburb_with_properties_sold_over_4weeks))
```

QUERY OUTPUT (SCREENSHOT)

View 1.

suburb
Benowa
Thomson
Cardio
Annandale

View 2.

suburb
Camperdown

Query 7: What is the average number of car spaces available for houses on Pymont Bridge Road

QUERY SQL

```
CREATE VIEW avg_carspaces_on_pymont_bridge_houses AS (  
  SELECT AVG(carspaces)  
  FROM PROPERTY  
  WHERE stname = "Pymont Bridge" AND sttype = "Rd" AND pid NOT IN(  
    SELECT pid  
    FROM SHAREDPROPERTY))
```

QUERY OUTPUT (SCREENSHOT)

AVG(carspaces)
2.0000

Query 8: Which suburb(s) has had the highest increase in average rent between 2014 and 2016

QUERY SQL

View 1.

```
CREATE VIEW rent_prices_by_suburb_2014 AS
SELECT suburb, price
FROM PROPERTY AS P, LISTING AS L
WHERE P.pid = L.pid AND type = "Rent" AND dateclose < "2015-01-01"

UNION ALL

SELECT suburb, price
FROM PROPERTY AS P, SHAREDLISTING AS L
WHERE P.pid = L.pid AND type = "Rent" AND dateclose < "2015-01-01"
```

View 2.

```
CREATE VIEW rent_prices_by_suburb_2016 AS
SELECT suburb, price
FROM PROPERTY AS P, LISTING AS L
WHERE P.pid = L.pid AND type = "Rent" AND dateclose < "2017-01-01"

UNION ALL

SELECT suburb, price
FROM PROPERTY AS P, SHAREDLISTING AS L
WHERE P.pid = L.pid AND type = "Rent" AND dateclose < "2017-01-01"
```

View 3.

```
CREATE VIEW average_rent_by_suburb_2014 AS (
SELECT suburb, AVG(price) AS Price
FROM rent_prices_by_suburb_2014
GROUP BY suburb )
```

View 4.

```
CREATE VIEW average_rent_by_suburb_2016 AS (
SELECT suburb, AVG(price) AS Price
FROM rent_prices_by_suburb_2016
GROUP BY suburb )
```

View 5.

```
CREATE VIEW rent_difference_2014_2016 AS (
SELECT A.suburb, A.Price - B.Price AS Pricediff
FROM average_rent_by_suburb_2016 AS A INNER JOIN average_rent_by_suburb_2014 AS B
ON A.suburb = B.suburb )
```

View 6.

```
CREATE VIEW suburb_with_highest_increase_rent AS (
SELECT suburb
FROM rent_difference_2014_2016
WHERE Pricediff >= ALL(
SELECT Pricediff
FROM rent_difference_2014_2016))
```

QUERY OUTPUT (SCREENSHOT)

View 1.

suburb	price
Benowa	375
Cardio	400
Benowa	400
Benowa	400
Cardio	250
Cardio	550

View 2.

suburb	price
Benowa	375
Cardio	575
Cardio	400
Benowa	400
Benowa	400
Benowa	400
Cardio	250
Cardio	250
Cardio	550

View 3.

suburb	Price
Benowa	391.6667
Cardio	400.0000

View 4.

suburb	Price
Benowa	393.7500
Cardio	405.0000

View 5.

suburb	Pricediff
Benowa	2.0833
Cardio	5.0000

View 6.

suburb
Cardio

Challenge Query 1: List the properties that have been sold by real estate agencies that are located in the same suburb as the property.

QUERY SQL

QUERY OUTPUT (SCREENSHOT)

Challenge Query 2: Who is the most successful real estate agent in 2018 (Hint: who has sold and rented properties of the greatest value)

QUERY SQL

View 1.

```
CREATE VIEW Agent_and_price_for_all_properties_2018 AS
SELECT agent, SUM(price) AS price
FROM LISTING
WHERE dateclose BETWEEN "2018-01-01" AND "2018-12-31"
GROUP BY agent

UNION ALL

SELECT agent, SUM(price) AS price
FROM SHAREDLISTING
WHERE dateclose BETWEEN "2018-01-01" AND "2018-12-31"
GROUP BY agent
```

View 2.

```
CREATE VIEW Agent_and_pricesum_for_all_properties_2018 AS (
SELECT agent, SUM(price)
FROM Agent_and_price_for_all_properties_2018
GROUP BY agent )
```

View 3.

```
CREATE VIEW Best_agent_2018 AS(
SELECT name
FROM AGENT
WHERE agentlicence = (
SELECT agent
FROM Agent_and_pricesum_for_all_properties_2018
WHERE `SUM(price)` >= ALL (
SELECT `SUM(price)`
FROM Agent_and_pricesum_for_all_properties_2018)))
```

Assumptions:

Rent prices will stay as it is to compare for the best agent as multiplying the rent price to get the yearly rent cost will have no changes in the result. For example comparing 250 & 350 per week which becomes 13000 & 18200 per year respectively. Thus, it'll be different comparing the weekly rent pay to yearly rent pay.

QUERY OUTPUT (SCREENSHOT)

View 1.

agent	price
89461765	1000
242367744	150000
89461765	450
242367744	650
383392365	570

View 2.

agent	SUM(price)
89461765	1450
242367744	150650
383392365	570

View 3.

name
Tim Wang

Challenge Query 3: List the agencies that have property listings in every suburb

QUERY SQL

View 1.

```
CREATE VIEW Agency_suburb_for_all_listing AS
SELECT suburb, agent, agency
FROM PROPERTY AS P, LISTING AS L, AGENCY AS A, AGENT AS G
WHERE P.pid = L.pid AND G.agentlicence = L.agent AND A.agencylicence = G.agency

UNION ALL

SELECT suburb, agent, agency
FROM PROPERTY AS P, SHAREDLISTING AS L, AGENCY AS A, AGENT AS G
WHERE P.pid = L.pid AND G.agentlicence = L.agent AND A.agencylicence = G.agency
```

View 2.

```
CREATE VIEW Agencies_with_listing_in_all_suburb AS(
SELECT agencyname
FROM AGENCY AS A
WHERE NOT EXISTS(
    SELECT suburb
    FROM PROPERTY
    WHERE suburb NOT IN(
        SELECT suburb
        FROM Agency_suburb_for_all_listing
        WHERE agency = A.agencylicence)))
```

Assumptions:

Agencies that have or had property listings in every suburb will be listed

QUERY OUTPUT (SCREENSHOT)

View 1.

suburb	agent	agency
Benowa	98432371	225328623
Benowa	98432371	225328623
Thomson	98432371	225328623
Thomson	98432371	225328623
Cardio	98432371	225328623
Camperdown	383392365	153242423
Camperdown	89461765	153222312
Camperdown	242367744	153222312
Camperdown	383392365	153242423
Benowa	98432371	225328623
Cardio	98432371	225328623
Cardio	98432371	225328623
Annandale	242367744	153222312
Annandale	242367744	153222312
Annandale	383392365	153242423
Question	98432371	225328623

View 2.

Question	89461765	153222312
Question	89461765	153222312
Question	89461765	153222312
Question	89461765	153222312
Annandale	383392365	153242423
Annandale	98432371	225328623
Camperdown	89461765	153222312
Camperdown	98432371	225328623
Camperdown	89461765	153222312
Camperdown	242367744	153222312
Benowa	98432371	225328623
Benowa	98432371	225328623
Benowa	98432371	225328623
Cardio	98432371	225328623
Cardio	98432371	225328623
Cardio	98432371	225328623

agencyname

Trusted Real Estate

Challenge Query 4: Which real estate agency (or agencies) has most number of open houses available for inspection on 24 April 2018

QUERY SQL

QUERY OUTPUT (SCREENSHOT)