SQL workbench Queries - Report

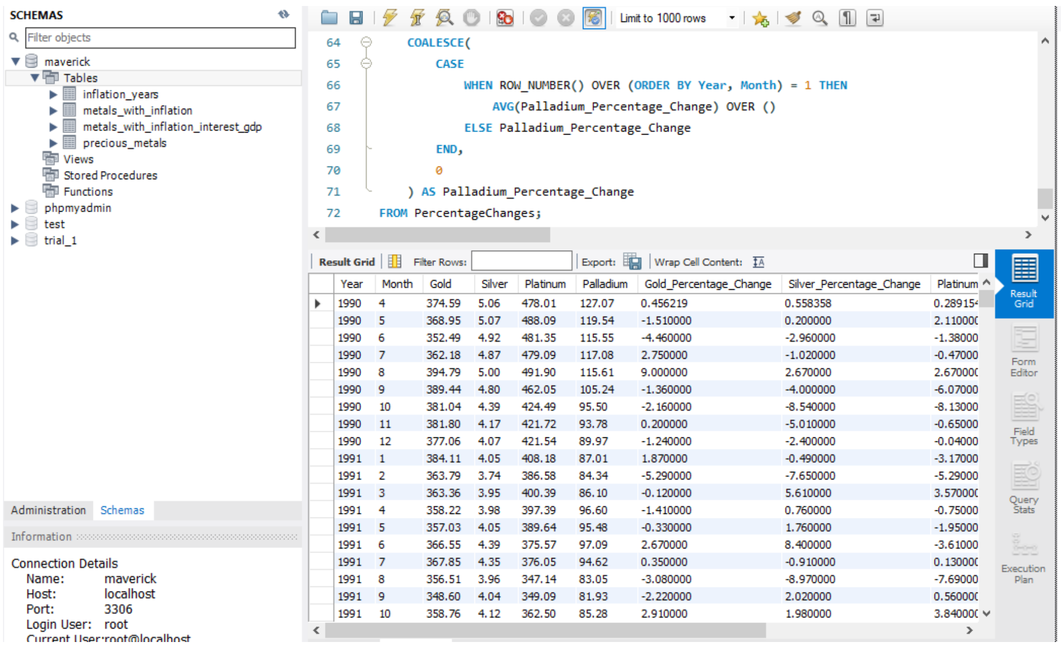
Calculating a monthly percentage change:

```
SELECT
    Year,
    Month,
    Gold,
    Silver,
    Platinum,
    Palladium,
    ROUND(((Gold - LAG(Gold) OVER (ORDER BY Year, Month)) / LAG(Gold) OVER (ORDER BY Year, Month)) * 100, 2) AS Gold_Percentage_Change,
    ROUND(((Silver - LAG(Silver) OVER (ORDER BY Year, Month)) / LAG(Silver) OVER (ORDER BY Year, Month)) * 100, 2) AS Silver_Percentage_Change,
    ROUND(((Platinum - LAG(Platinum) OVER (ORDER BY Year, Month)) / LAG(Platinum) OVER (ORDER BY Year, Month)) * 100, 2) AS Platinum_Percentage_Change,
    ROUND(((Palladium - LAG(Palladium) OVER (ORDER BY Year, Month)) / LAG(Palladium) OVER (ORDER BY Year, Month)) * 100, 2) AS Palladium_Percentage_Change
FROM metals_with_inflation_interest_GDP;


WITH PercentageChanges AS (
    SELECT
        Year,
        Month,
        Gold,
        Silver,
        Platinum,
        Palladium,
        ROUND(((Gold - LAG(Gold) OVER (ORDER BY Year, Month)) / LAG(Gold) OVER (ORDER BY Year, Month)) * 100, 2) AS Gold_Percentage_Change,
        ROUND(((Silver - LAG(Silver) OVER (ORDER BY Year, Month)) / LAG(Silver) OVER (ORDER BY Year, Month)) * 100, 2) AS Silver_Percentage_Change,
        ROUND(((Platinum - LAG(Platinum) OVER (ORDER BY Year, Month)) / LAG(Platinum) OVER
(ORDER BY Year, Month)) * 100, 2) AS Platinum_Percentage_Change,
        ROUND(((Palladium - LAG(Palladium) OVER (ORDER BY Year, Month)) / LAG(Palladium) OVER
(ORDER BY Year, Month)) * 100, 2) AS Palladium_Percentage_Change
    FROM metals_with_inflation_interest_GDP
)

SELECT
    Year,
    Month,
    Gold,
    Silver,
    Platinum,
    Palladium,
    COALESCE(
        CASE
            WHEN ROW_NUMBER() OVER (ORDER BY Year, Month) = 1 THEN
                AVG(Gold_Percentage_Change) OVER ()
            ELSE Gold_Percentage_Change
        END,
        0
    ) AS Gold_Percentage_Change,
    COALESCE(
        CASE
            WHEN ROW_NUMBER() OVER (ORDER BY Year, Month) = 1 THEN
                AVG(Silver_Percentage_Change) OVER ()
            ELSE Silver_Percentage_Change
        END,
        0
    ) AS Silver_Percentage_Change,
    COALESCE(
        CASE
```

```
            WHEN ROW_NUMBER() OVER (ORDER BY Year, Month) = 1 THEN
                AVG(Platinum_Percentage_Change) OVER ()
            ELSE Platinum_Percentage_Change
        END,
        0
    ) AS Platinum_Percentage_Change,
    COALESCE(
        CASE
            WHEN ROW_NUMBER() OVER (ORDER BY Year, Month) = 1 THEN
                AVG(Palladium_Percentage_Change) OVER ()
            ELSE Palladium_Percentage_Change
        END,
        0
    ) AS Palladium_Percentage_Change
FROM PercentageChanges;
```



Connection Details
Name: maverick
Host: localhost
Port: 3306
Login User: root
Current User:root@localhost

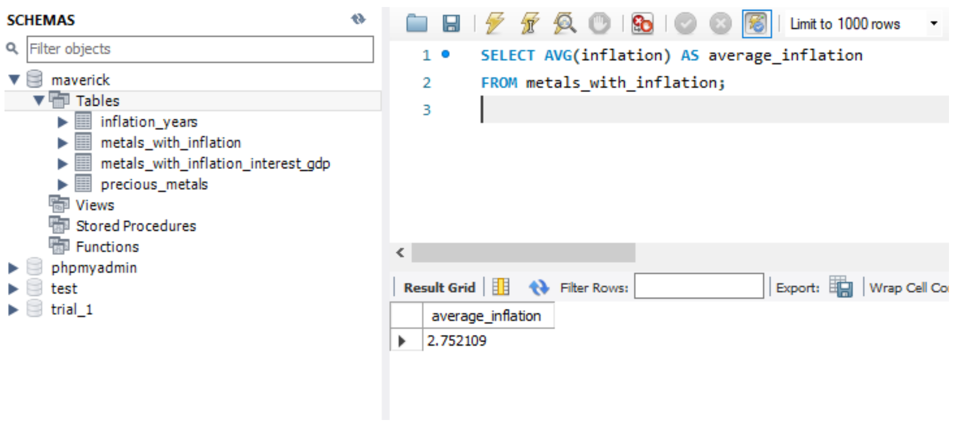
```
    COALESCE(
        CASE
            WHEN ROW_NUMBER() OVER (ORDER BY Year, Month) = 1 THEN
                AVG(Palladium_Percentage_Change) OVER ()
            ELSE Palladium_Percentage_Change
        END,
        0
    ) AS Palladium_Percentage_Change
FROM PercentageChanges;
```

Year	Month	Gold	Silver	Platinum	Palladium	Gold_Percentage_Change	Silver_Percentage_Change	Platinum
1990	4	374.59	5.06	478.01	127.07	0.456219	0.558358	0.28915
1990	5	368.95	5.07	488.09	119.54	-1.510000	0.200000	2.11000
1990	6	352.49	4.92	481.35	115.55	-4.460000	-2.960000	-1.38000
1990	7	362.18	4.87	479.09	117.08	2.750000	-1.020000	-0.47000
1990	8	394.79	5.00	491.90	115.61	9.000000	2.670000	2.67000
1990	9	389.44	4.80	462.05	105.24	-1.360000	-4.000000	-6.07000
1990	10	381.04	4.39	424.49	95.50	-2.160000	-8.540000	-8.13000
1990	11	381.80	4.17	421.72	93.78	0.200000	-5.010000	-0.65000
1990	12	377.06	4.07	421.54	89.97	-1.240000	-2.400000	-0.04000
1991	1	384.11	4.05	408.18	87.01	1.870000	-0.490000	-3.17000
1991	2	363.79	3.74	386.58	84.34	-5.290000	-7.650000	-5.29000
1991	3	363.36	3.95	400.39	86.10	-0.120000	5.610000	3.57000
1991	4	358.22	3.98	397.39	96.60	-1.410000	0.760000	-0.75000
1991	5	357.03	4.05	389.64	95.48	-0.330000	1.760000	-1.95000
1991	6	366.55	4.39	375.57	97.09	2.670000	8.400000	-3.61000
1991	7	367.85	4.35	376.05	94.62	0.350000	-0.910000	0.13000
1991	8	356.51	3.96	347.14	83.05	-3.080000	-8.970000	-7.69000
1991	9	348.60	4.04	349.09	81.93	-2.220000	2.020000	0.56000
1991	10	358.76	4.12	362.50	85.28	2.910000	1.980000	3.84000

Calculating the average inflation

SELECT AVG(inflation) AS average_inflation

FROM metals_with_inflation;



```
SELECT AVG(inflation) AS average_inflation
FROM metals_with_inflation;
```

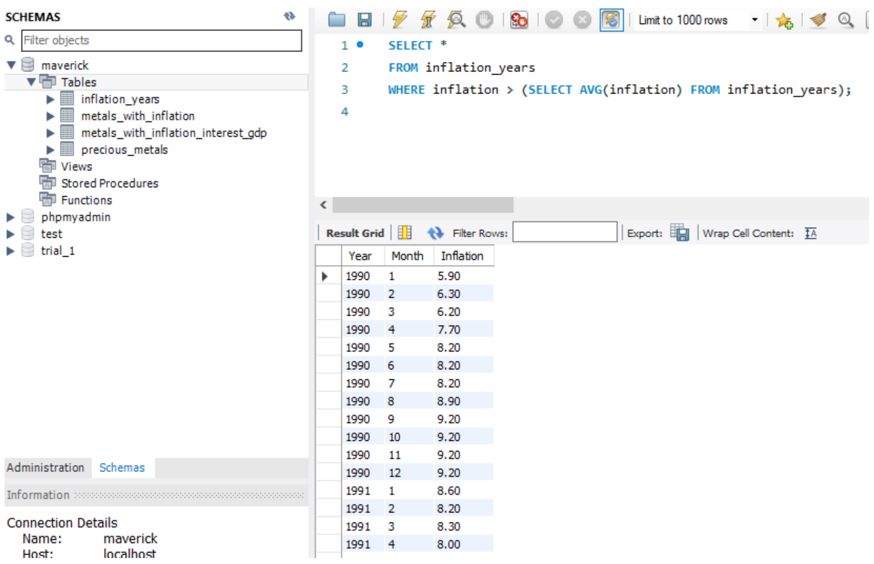
average_inflation
2.752109

Selecting all the values where inflation is higher than the average inflation.

SELECT *

FROM inflation_years

WHERE inflation > (SELECT AVG(inflation) FROM inflation_years);



```
SELECT *
FROM inflation_years
WHERE inflation > (SELECT AVG(inflation) FROM inflation_years);
```

Year	Month	Inflation
1990	1	5.90
1990	2	6.30
1990	3	6.20
1990	4	7.70
1990	5	8.20
1990	6	8.20
1990	7	8.20
1990	8	8.90
1990	9	9.20
1990	10	9.20
1990	11	9.20
1990	12	9.20
1991	1	8.60
1991	2	8.20
1991	3	8.30
1991	4	8.00

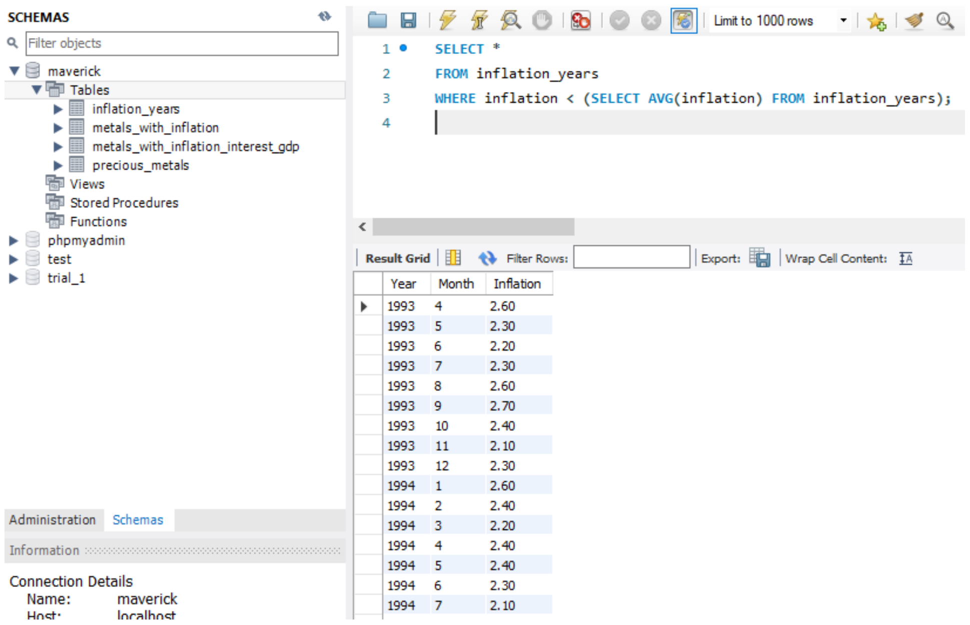
Connection Details
Name: maverick
Host: localhost

Selecting all the values where inflation is lower than the average inflation.

SELECT *

FROM inflation_years

WHERE inflation < (SELECT AVG(inflation) FROM inflation_years);



```
SELECT *
FROM inflation_years
WHERE inflation < (SELECT AVG(inflation) FROM inflation_years);
```

Year	Month	Inflation
1993	4	2.60
1993	5	2.30
1993	6	2.20
1993	7	2.30
1993	8	2.60
1993	9	2.70
1993	10	2.40
1993	11	2.10
1993	12	2.30
1994	1	2.60
1994	2	2.40
1994	3	2.20
1994	4	2.40
1994	5	2.40
1994	6	2.30
1994	7	2.10

Connection Details
Name: maverick
Host: localhost