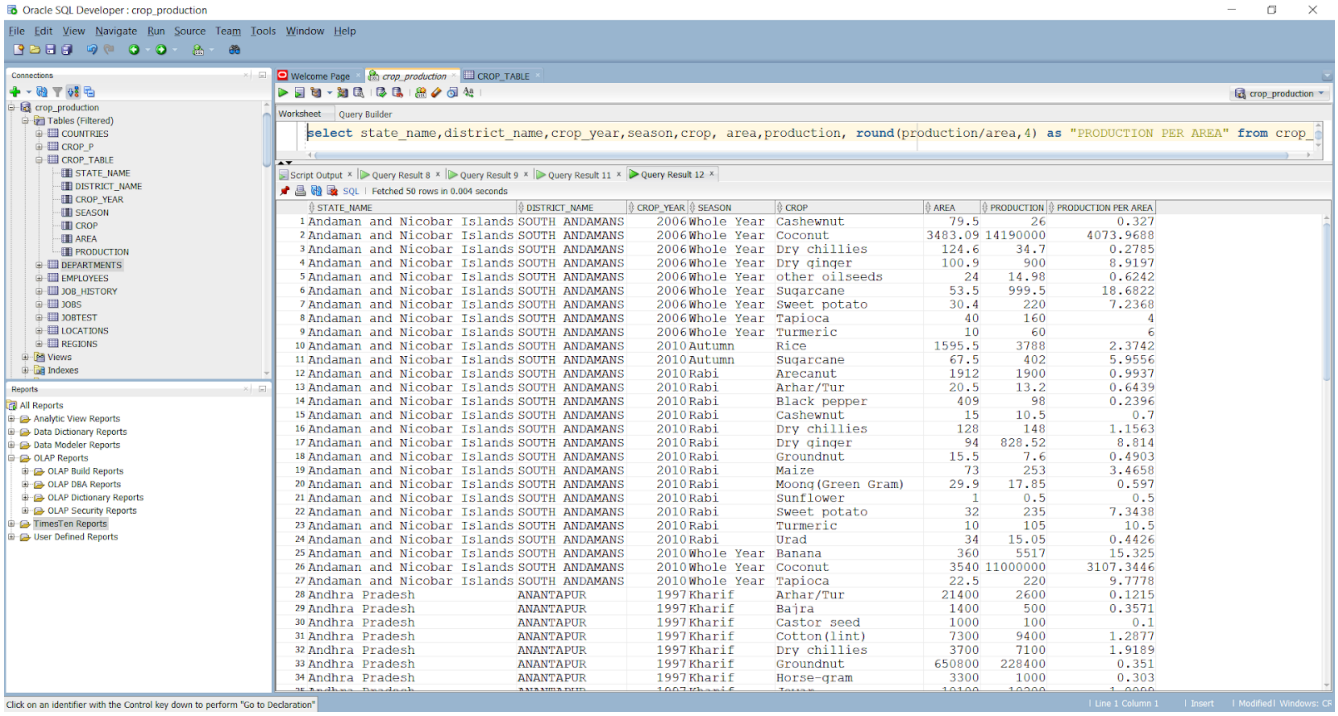
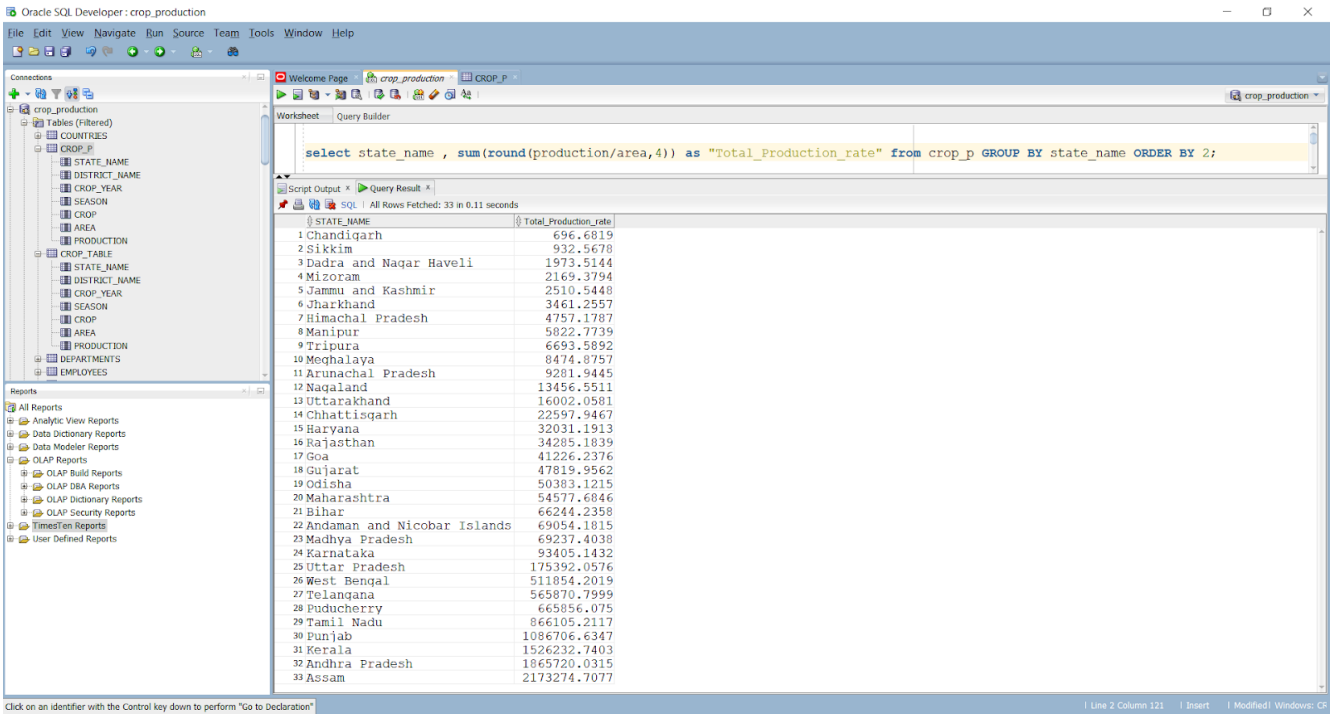
1. **Create a separate column to show production per Area for every crop in each State?**
   Solution :-

   select state_name,district_name,crop_year,season,crop, area,production, round(production/area,4) as "PRODUCTION PER AREA" from crop_p;

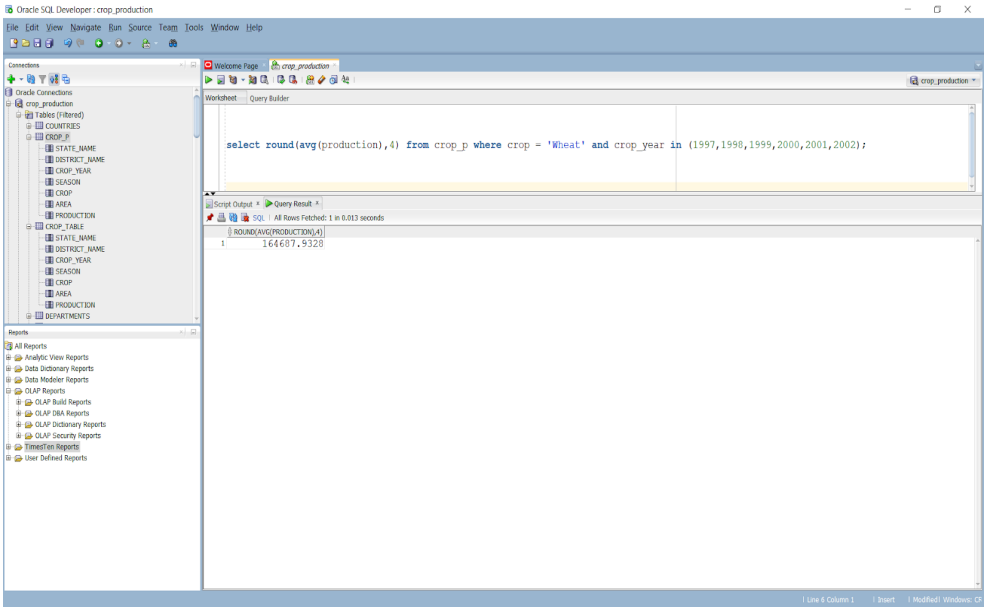


2. **Extract the data for the Total production rate in each state in increasing order so that we can get the order of production rate across all states from low to high.**
   Solution :-

   select state_name , sum(round(production/area,4)) as "Total_Production_rate" from crop_p GROUP BY state_name ORDER BY 2;

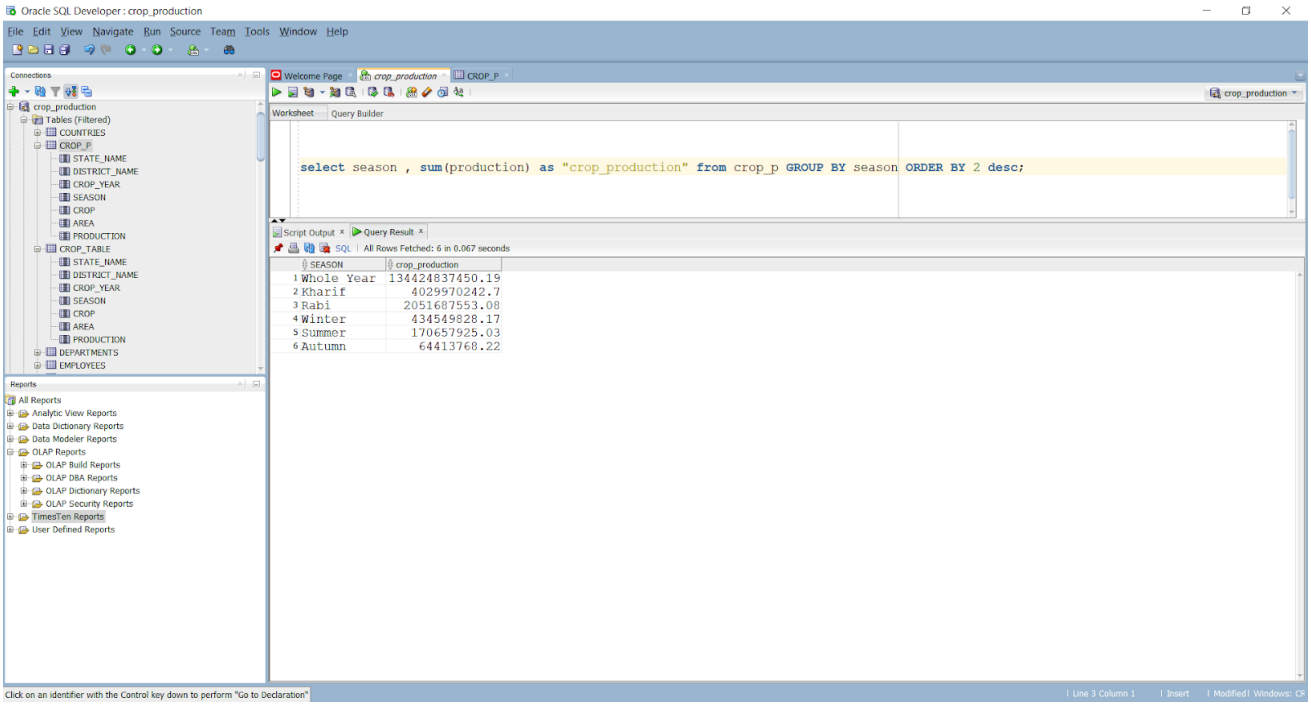


3. **Find the average production of Wheat in 5 year ?**
   Solution :-
   select round(avg(production),4) from crop_p where crop = 'Wheat' and crop_year in (1997,1998,1999,2000,2001,2002);



4. **Find the total crop production of each seasonal crop in decreasing order to understand the broad idea in which season we get the highest production of crops.**
   Solution :-

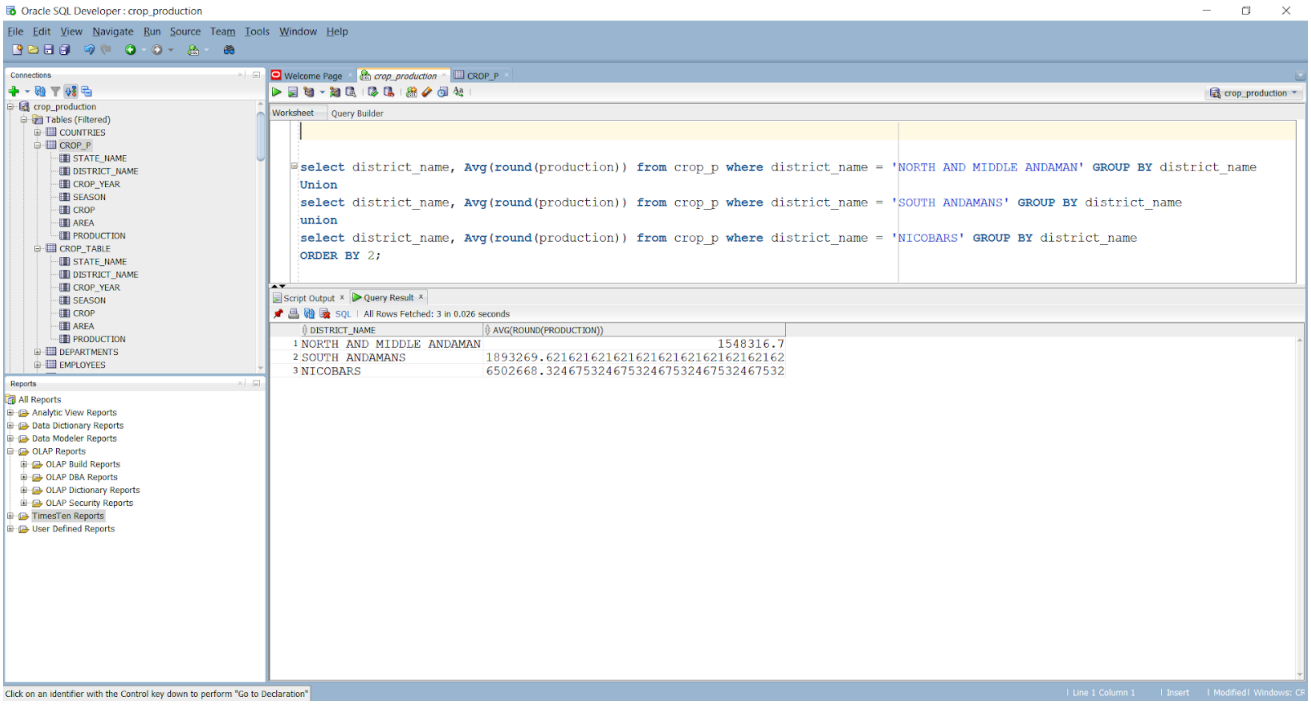
   select season , sum(production) as "crop_production" from crop_p GROUP BY season ORDER BY 2 desc;



5. **Find the average crop production of all districts of Andaman and Nicobar Group of Island?**
   1.1. South Andmans
   1.2. Nicobars
   1.3. NORTH AND MIDDLE ANDAMAN

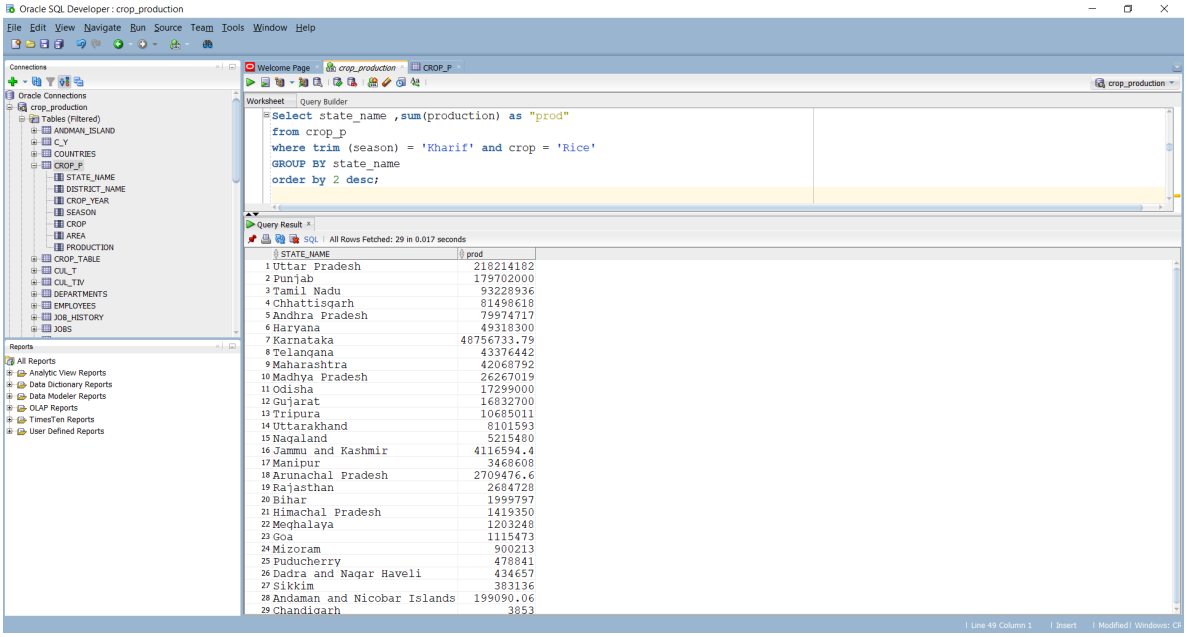
   Solution:-

```
select district_name, Avg(round(production)) from crop_p where district_name = 'NORTH AND MIDDLE ANDAMAN' GROUP BY district_name
Union
select district_name, Avg(round(production)) from crop_p where district_name = 'SOUTH ANDAMANS' GROUP BY district_name
union
select district_name, Avg(round(production)) from crop_p where district_name = 'NICOBARS' GROUP BY district_name
ORDER BY 2;
```



6. **Find the top three states in which production of rice is high in the kharif season?**
   Solution :-

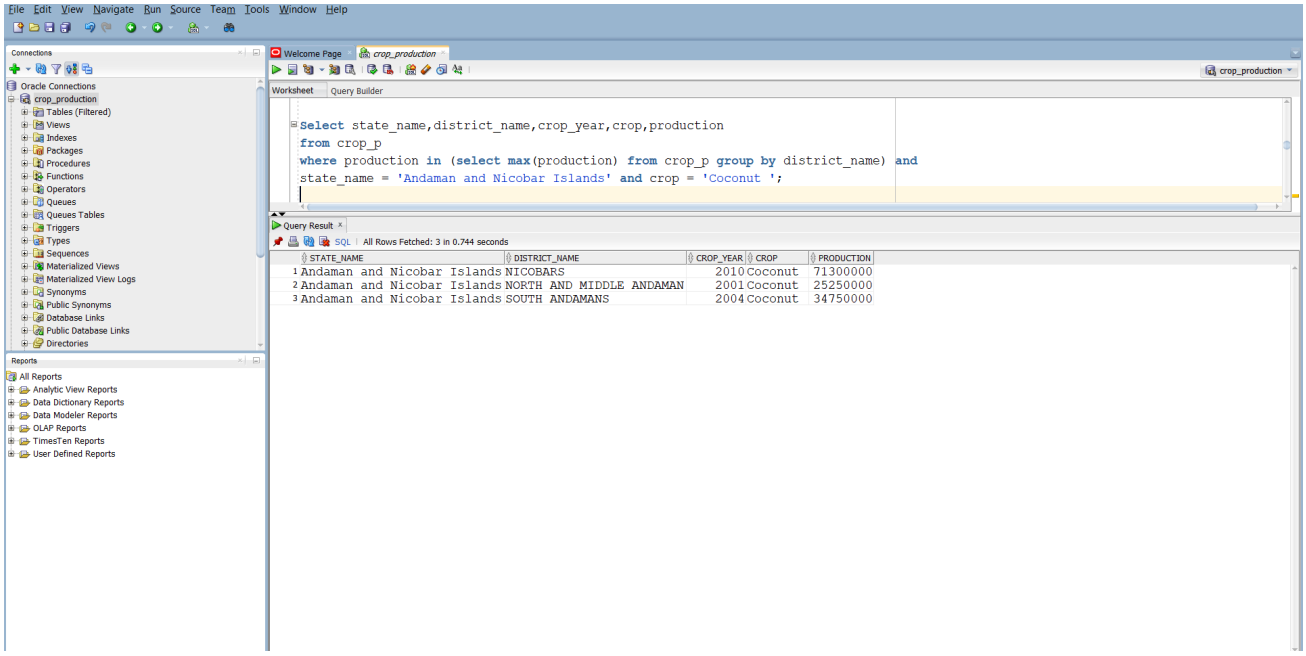
```
Select state_name ,sum(production) as "prod"
from crop_p
where trim (season) = 'Kharif' and crop = 'Rice'
GROUP BY state_name
order by 2 desc;
```



	STATE_NAME	prod
1	Uttar Pradesh	218214182
2	Punjab	179702000
3	Tamil Nadu	93228936
4	Chhattisgarh	81498618
5	Andhra Pradesh	79974717
6	Haryana	49318300
7	Karnataka	48756733.79
8	Telangana	43376442
9	Maharashtra	42068792
10	Madhya Pradesh	26267019
11	Odisha	17299000
12	Gujarat	16832700
13	Tripura	10685011
14	Uttarakhand	8101593
15	Nagaland	5215480
16	Jammu and Kashmir	4116594.4
17	Manipur	3468608
18	Arunachal Pradesh	2709476.6
19	Rajasthan	2684728
20	Bihar	1999797
21	Himachal Pradesh	1419350
22	Meghalaya	1203248
23	Goa	1115473
24	Mizoram	900213
25	Puducherry	478841
26	Dadra and Nagar Haveli	434657
27	Sikkim	383136
28	Andaman and Nicobar Islands	199090.06
29	Chandigarh	3853

7. **Find the year in which production of coconut is highest in Andaman and Nicobar Islands.**
   Solution :-

```
Select state_name,district_name,crop_year,crop,production
from crop_p
where production in (select max(production) from crop_p group by district_name) and
state_name = 'Andaman and Nicobar Islands' and crop = 'Coconut ';
```

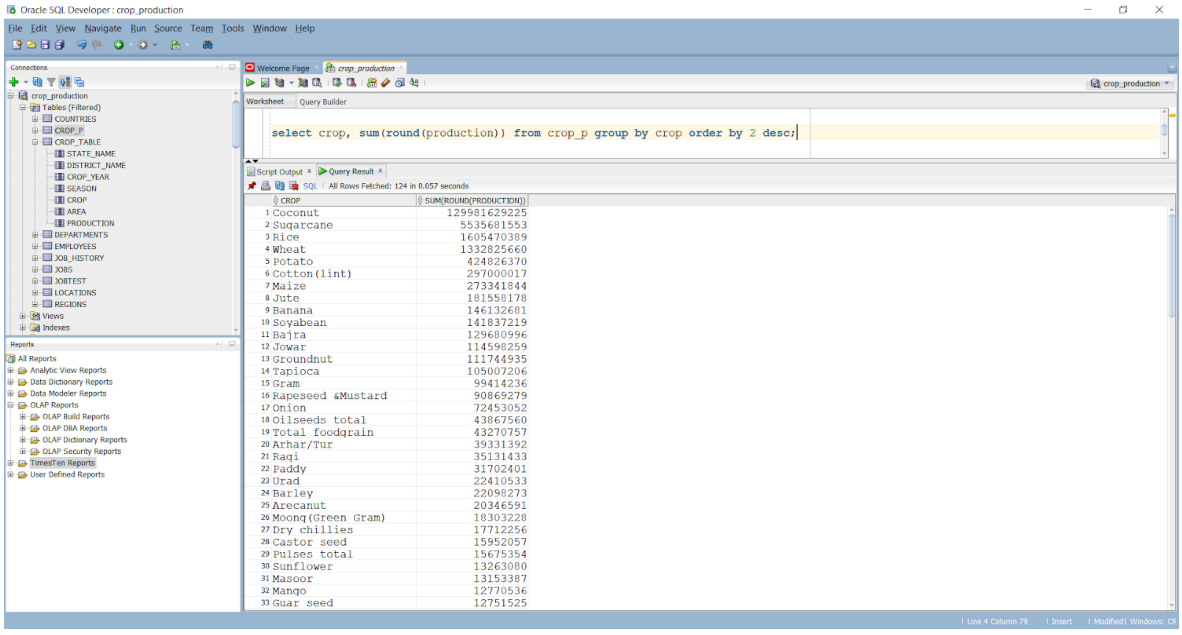


	STATE_NAME	DISTRICT_NAME	CROP_YEAR	CROP	PRODUCTION
1	Andaman and Nicobar Islands	NICOBARS	2010	Coconut	71300000
2	Andaman and Nicobar Islands	NORTH AND MIDDLE ANDAMAN	2001	Coconut	25250000
3	Andaman and Nicobar Islands	SOUTH ANDAMANS	2004	Coconut	34750000

8. **Extract data of total production of all types of crops all over India in which crop production is from highest to lowest and also analyse which crop is produced highest and lowest in India .**

Ans:-

select crop, sum(round(production)) from crop_p group by crop order by 2 desc;

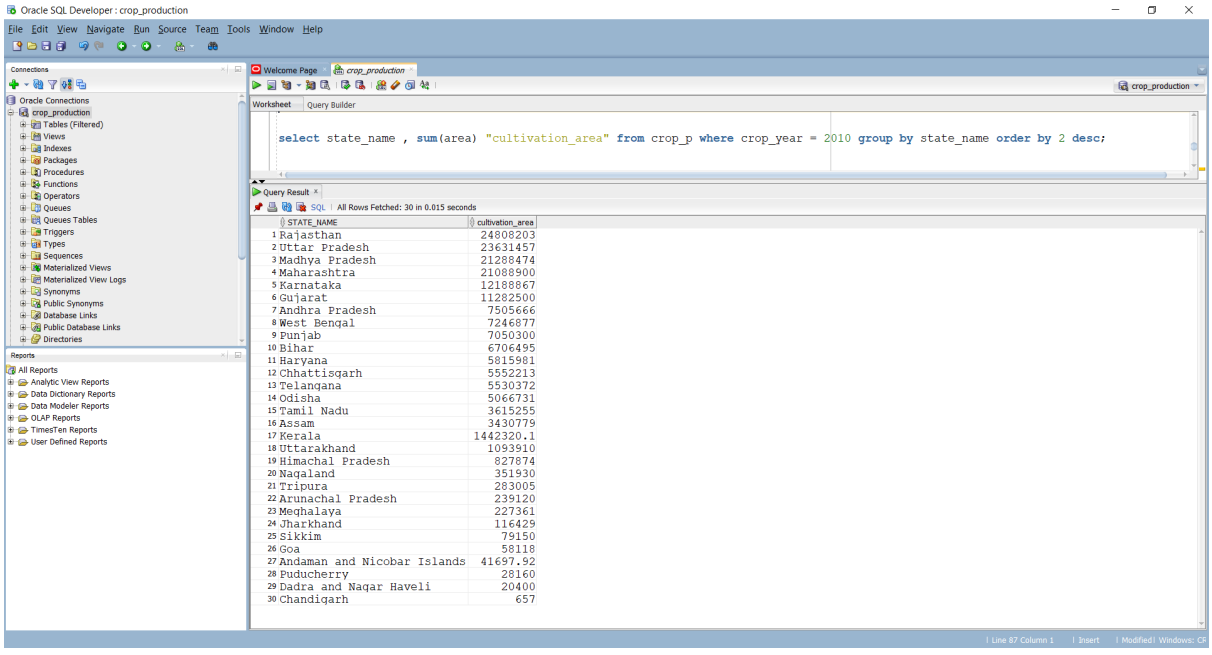


	CROP	SUM(ROUND(PRODUCTION))
1	Coconut	129981629225
2	Sugarcane	5535681553
3	Rice	1605470389
4	Wheat	1332825660
5	Potato	424826370
6	Cotton(lint)	297000017
7	Maize	273341844
8	Jute	181558178
9	Banana	146132681
10	Soyabean	141837219
11	Bajra	129680996
12	Jowar	114598259
13	Groundnut	111744935
14	Tapioca	105007206
15	Gram	99414236
16	Rapeseed &Mustard	90869279
17	Onion	72453052
18	Oilseeds total	43867560
19	Total foodgrain	43270757
20	Arhar/Tur	39331392
21	Ragi	35131433
22	Paddy	31702401
23	Urad	22410533
24	Barley	22098273
25	Arecanut	20346591
26	Moong(Green Gram)	18303228
27	Dry chillies	17712256
28	Castor seed	15952057
29	Pulses total	15675354
30	Sunflower	13263080
31	Masoor	13153387
32	Mango	12770536
33	Guar seed	12751525

9. **Extract and compare cultivation areas of different states and Find out which state has the maximum and minimum Area for Cultivation in India .**

Ans :-

select state_name , sum(area) "cultivation_area" from crop_p where crop_year = 2010 group by state_name order by 2 desc;



	STATE_NAME	cultivation_area
1	Rajasthan	24808203
2	Uttar Pradesh	23631457
3	Madhya Pradesh	21288474
4	Maharashtra	21088900
5	Karnataka	12188867
6	Gujarat	11282500
7	Andhra Pradesh	7505666
8	West Bengal	7246877
9	Punjab	7050300
10	Bihar	6706495
11	Haryana	5815981
12	Chhattisgarh	5552213
13	Telangana	5530372
14	Odisha	5066731
15	Tamil Nadu	3615255
16	Assam	3430779
17	Kerala	1442320.1
18	Uttarakhand	1093910
19	Himachal Pradesh	827874
20	Nagaland	351930
21	Tripura	283005
22	Arunachal Pradesh	239120
23	Meghalaya	227361
24	Jharkhand	116429
25	Sikkim	79150
26	Goa	58118
27	Andaman and Nicobar Islands	41697.92
28	Puducherry	28160
29	Dadra and Nagar Haveli	20400
30	Chandigarh	657

10. Create a data table based on zones-wise production and Find the total zone-wise production of crops.

1.1 East Zone

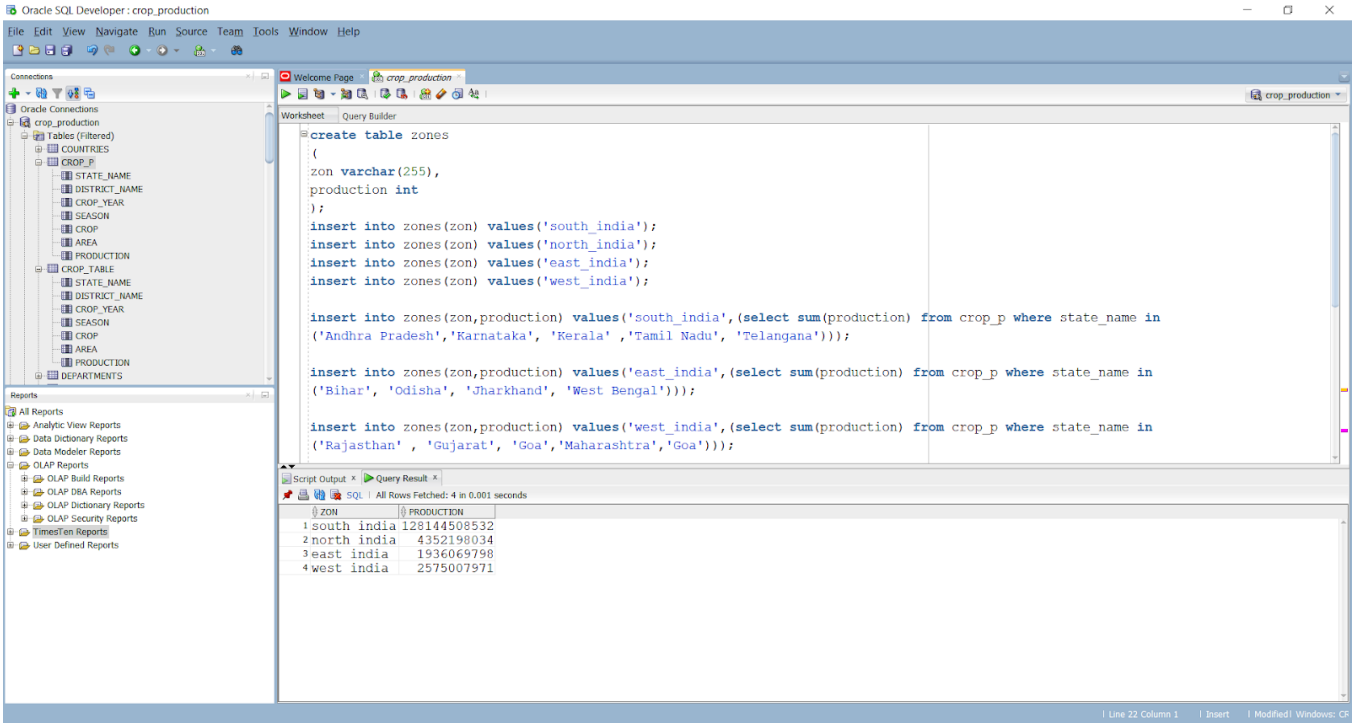
1.2 South Zone

1.3 West Zone

1.4 North Zone

Ans :-

```
create table zones
(
zon varchar(255),
production int
);
insert into zones(zon) values('south_india');
insert into zones(zon) values('north_india');
insert into zones(zon) values('east_india');
insert into zones(zon) values('west_india');

insert into zones(zon,production) values('south_india',(select sum(production) from crop_p
where state_name in
('Andhra Pradesh','Karnataka', 'Kerala' ,'Tamil Nadu', 'Telangana')));

insert into zones(zon,production) values('east_india',(select sum(production) from crop_p
where state_name in
('Bihar', 'Odisha', 'Jharkhand', 'West Bengal')));

insert into zones(zon,production) values('west_india',(select sum(production) from crop_p
where state_name in
('Rajasthan' , 'Gujarat', 'Goa','Maharashtra','Goa')));

insert into zones(zon,production) values('north_india',(select sum(production) from crop_p
where state_name in
('Jammu and Kashmir', 'Punjab', 'Himachal Pradesh', 'Haryana', 'Uttarakhand', 'Uttar
Pradesh', 'Chandigarh')));

Select * from zones;
```



11. Find the maximum and minimum production of Crops from all the zones.
Ans:-

select zon , production from zones where production = (select max(production) from zones) or
production = (select min(production) from zones);