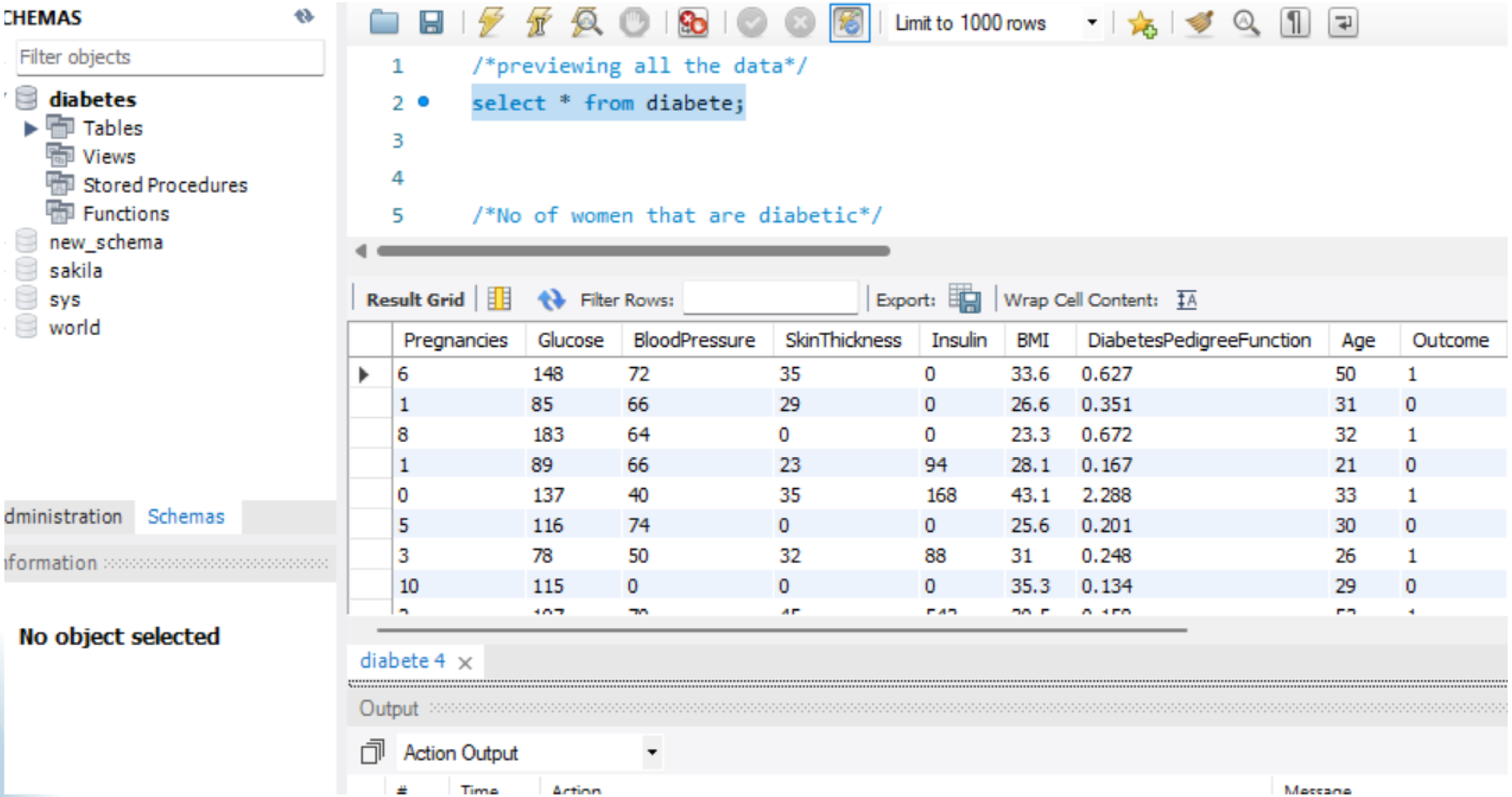
Data Analysis project on diabetes in women in india using SQL

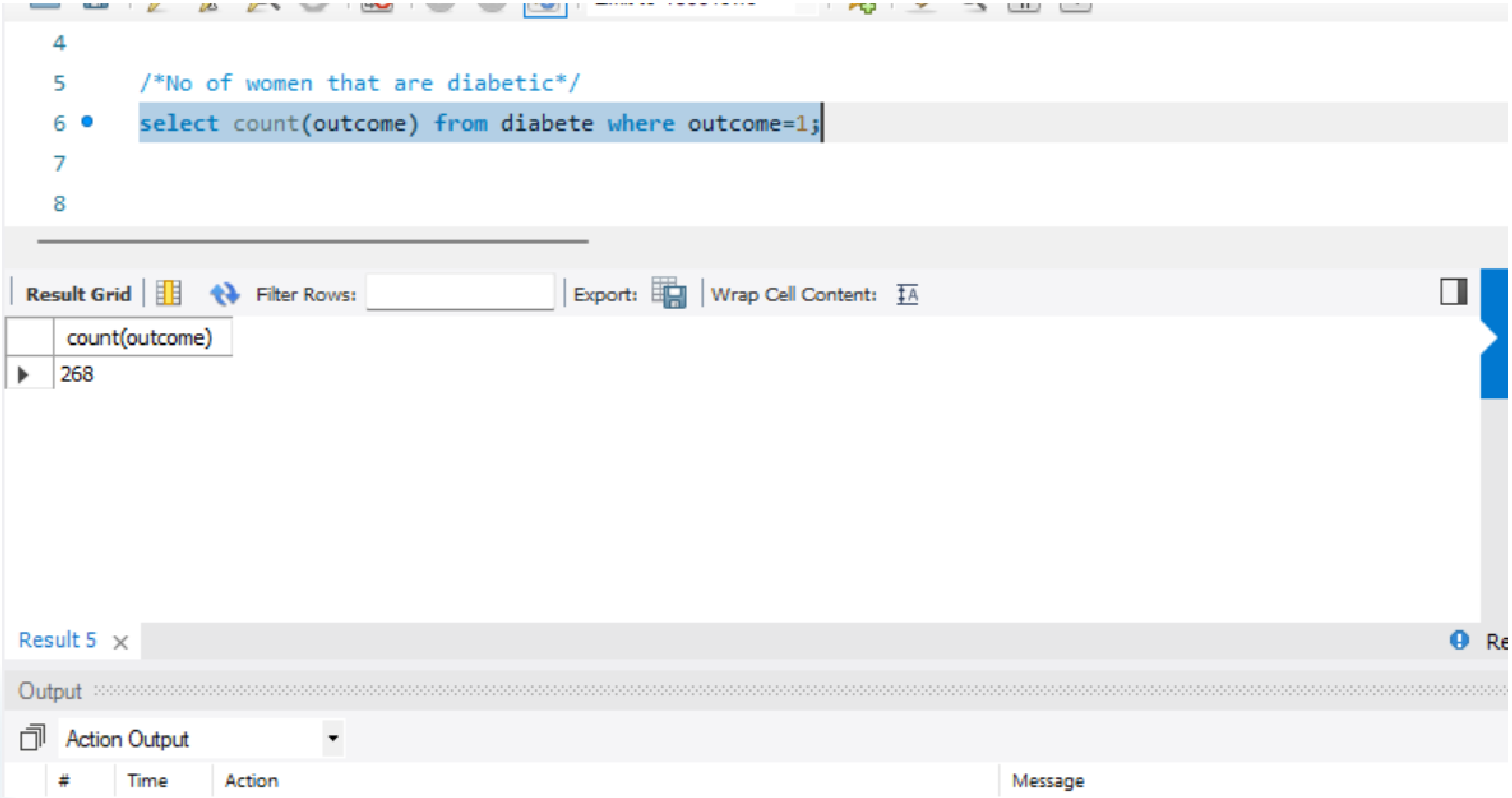
- Previewing all the data:



```
/*previewing all the data*/
select * from diabete;


/*No of women that are diabetic*/
```

Pregnancies	Glucose	BloodPressure	SkinThickness	Insulin	BMI	DiabetesPedigreeFunction	Age	Outcome
6	148	72	35	0	33.6	0.627	50	1
1	85	66	29	0	26.6	0.351	31	0
8	183	64	0	0	23.3	0.672	32	1
1	89	66	23	94	28.1	0.167	21	0
0	137	40	35	168	43.1	2.288	33	1
5	116	74	0	0	25.6	0.201	30	0
3	78	50	32	88	31	0.248	26	1
10	115	0	0	0	35.3	0.134	29	0

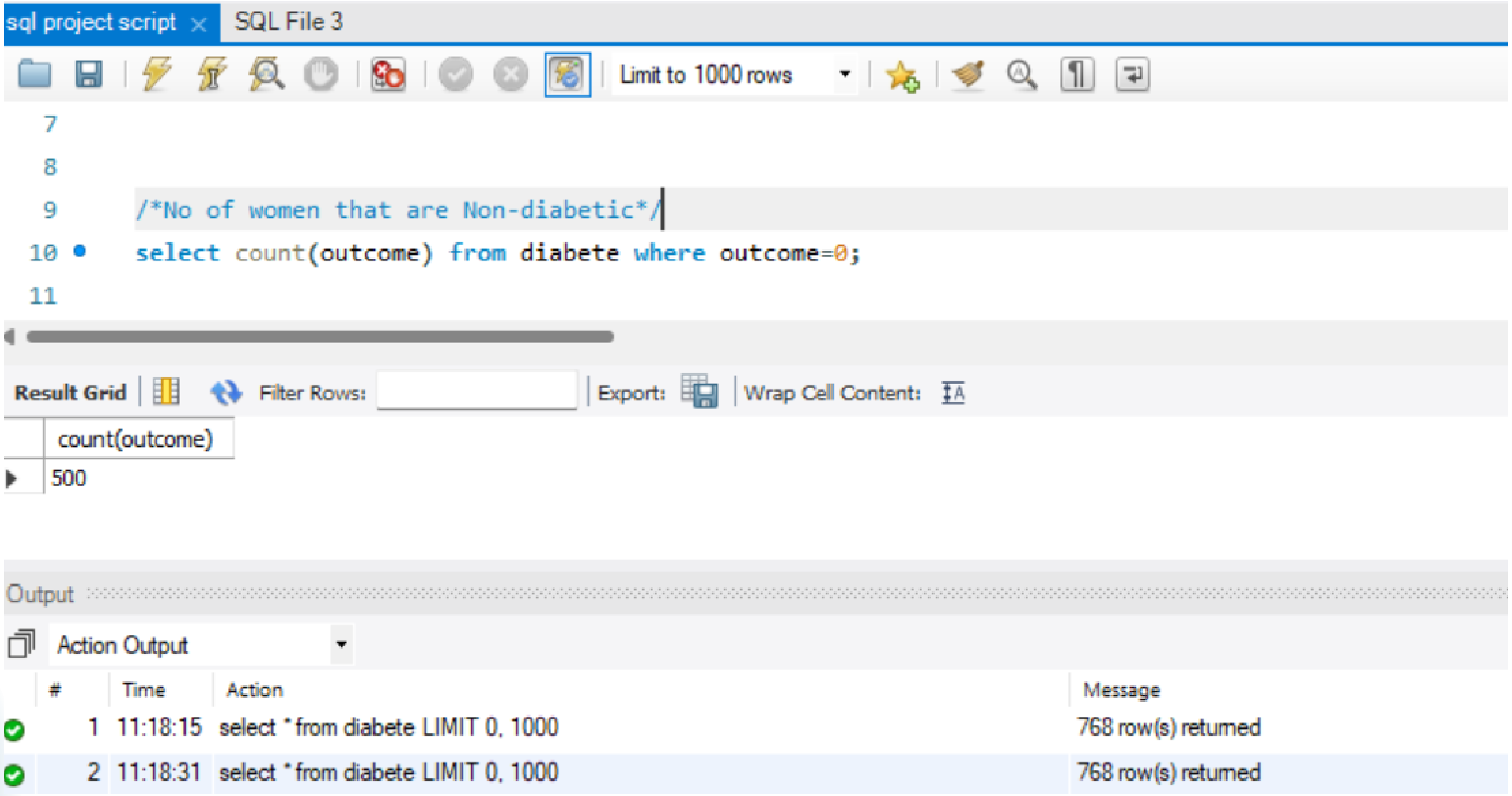
- No of women that are diabetic:



```
/*No of women that are diabetic*/
select count(outcome) from diabete where outcome=1;
```

count(outcome)
268

- No of women that are Non-diabetic:

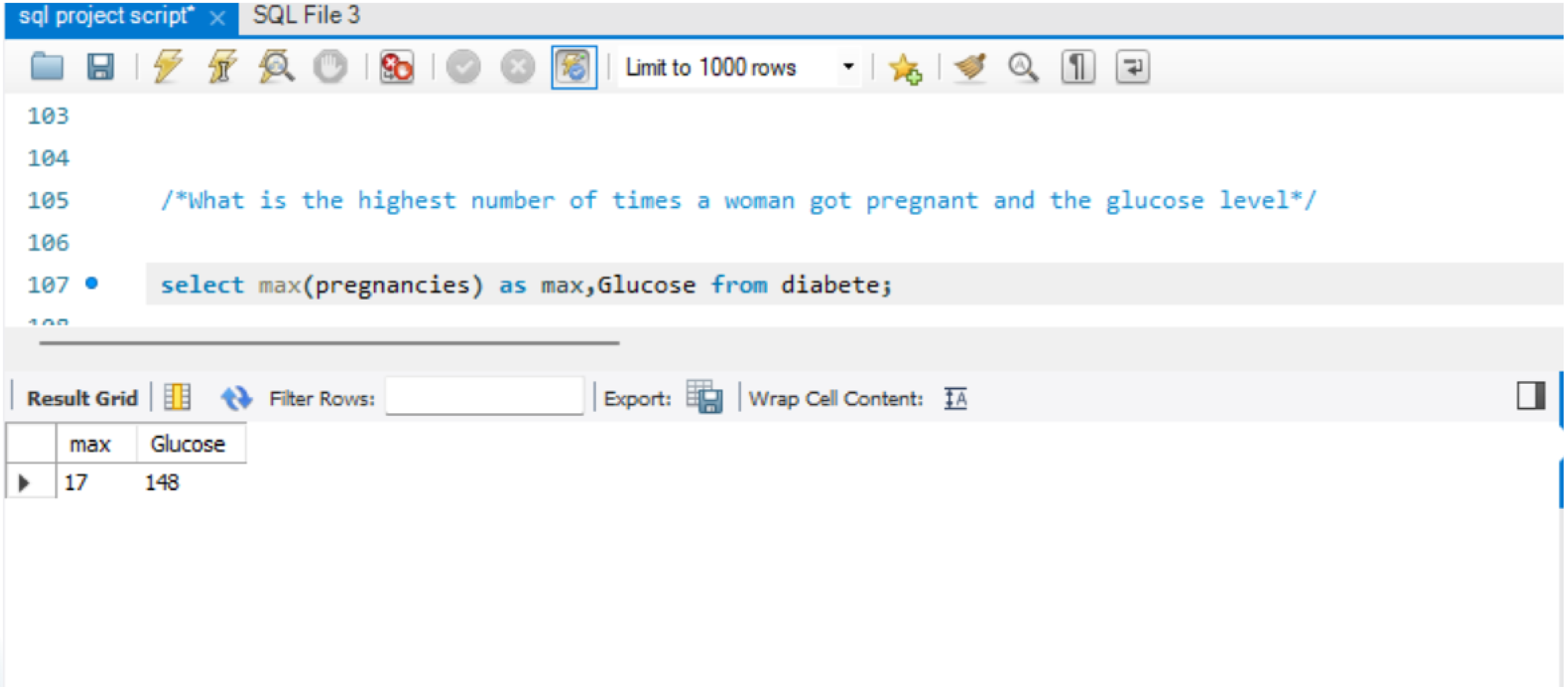


```
/*No of women that are Non-diabetic*/
select count(outcome) from diabete where outcome=0;
```

```
count(outcome)
500
```

```
#  Time      Action                                Message
1  11:18:15  select * from diabete LIMIT 0, 1000   768 row(s) returned
2  11:18:31  select * from diabete LIMIT 0, 1000   768 row(s) returned
```

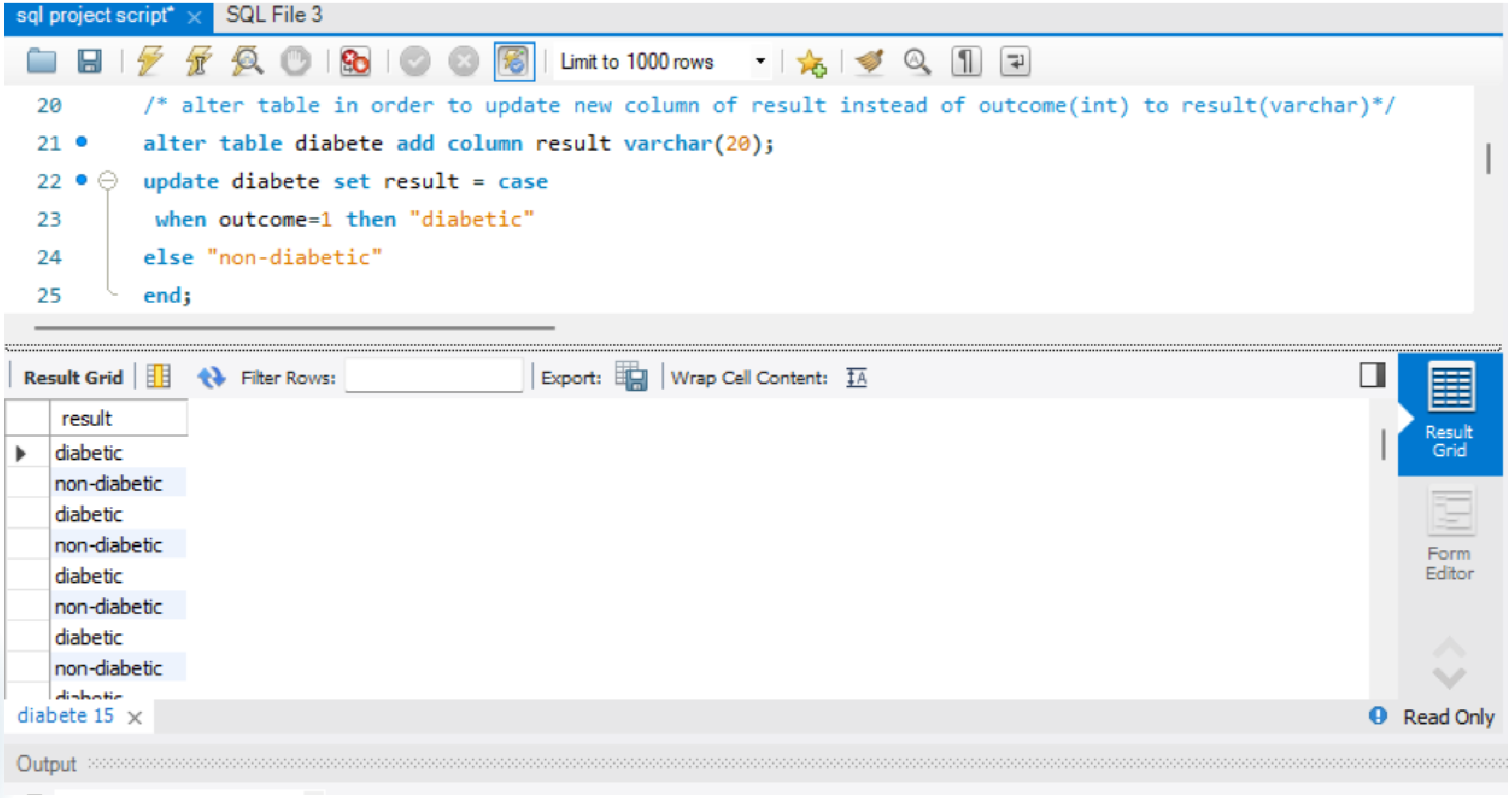
- What is the highest number of times a woman got pregnant and the glucose level



```
/*What is the highest number of times a woman got pregnant and the glucose level*/

select max(pregnancies) as max,Glucose from diabete;
```

max	Glucose
17	148

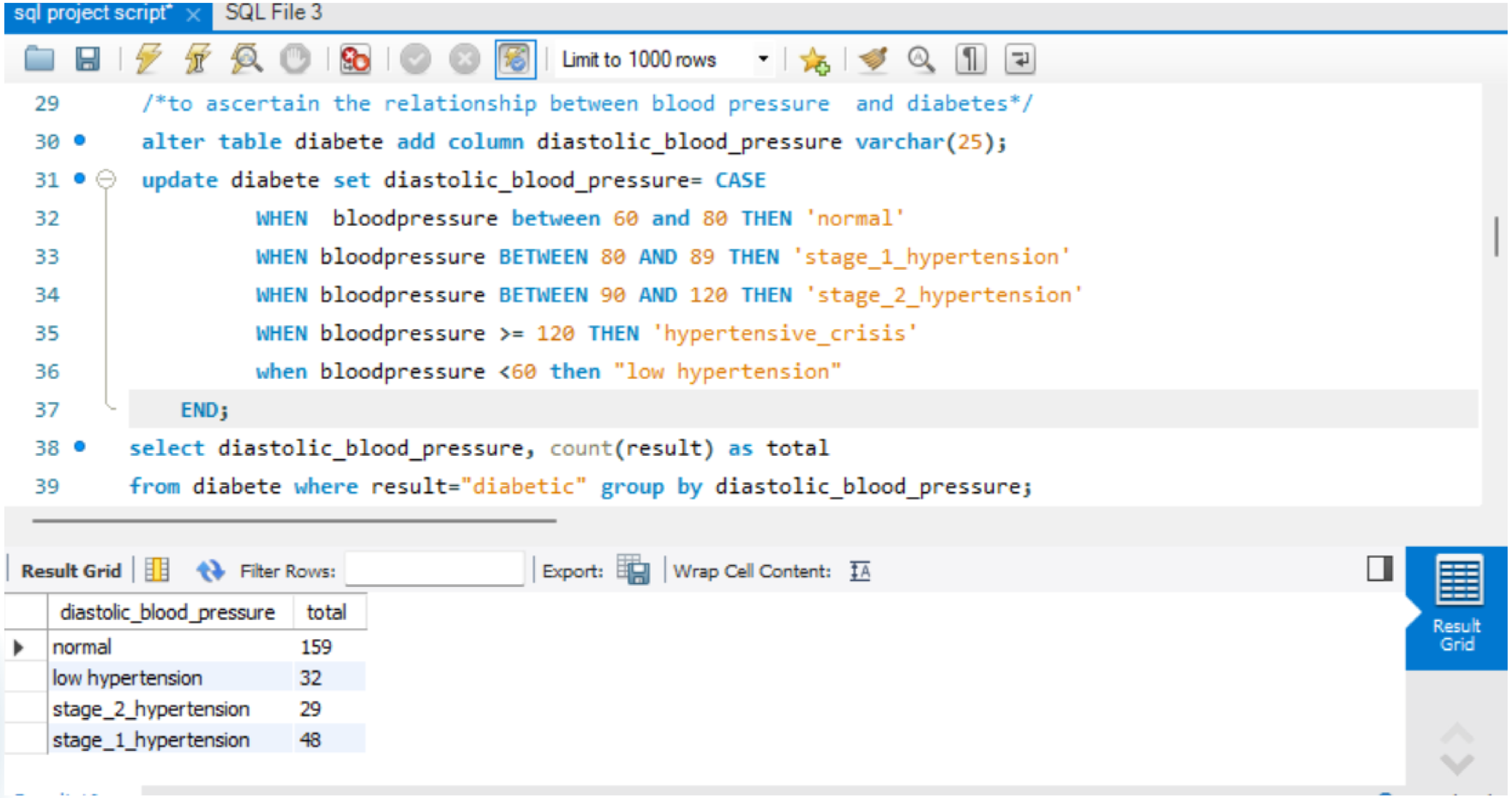
- Alter table in order to update new column of result instead of outcome(int) to result(varchar)



```sql
/* alter table in order to update new column of result instead of outcome(int) to result(varchar)*/
alter table diabete add column result varchar(20);
update diabete set result = case
 when outcome=1 then "diabetic"
else "non-diabetic"
end;
```

result
diabetic
non-diabetic
diabetic
non-diabetic
diabetic
non-diabetic
diabetic
non-diabetic
diabetic

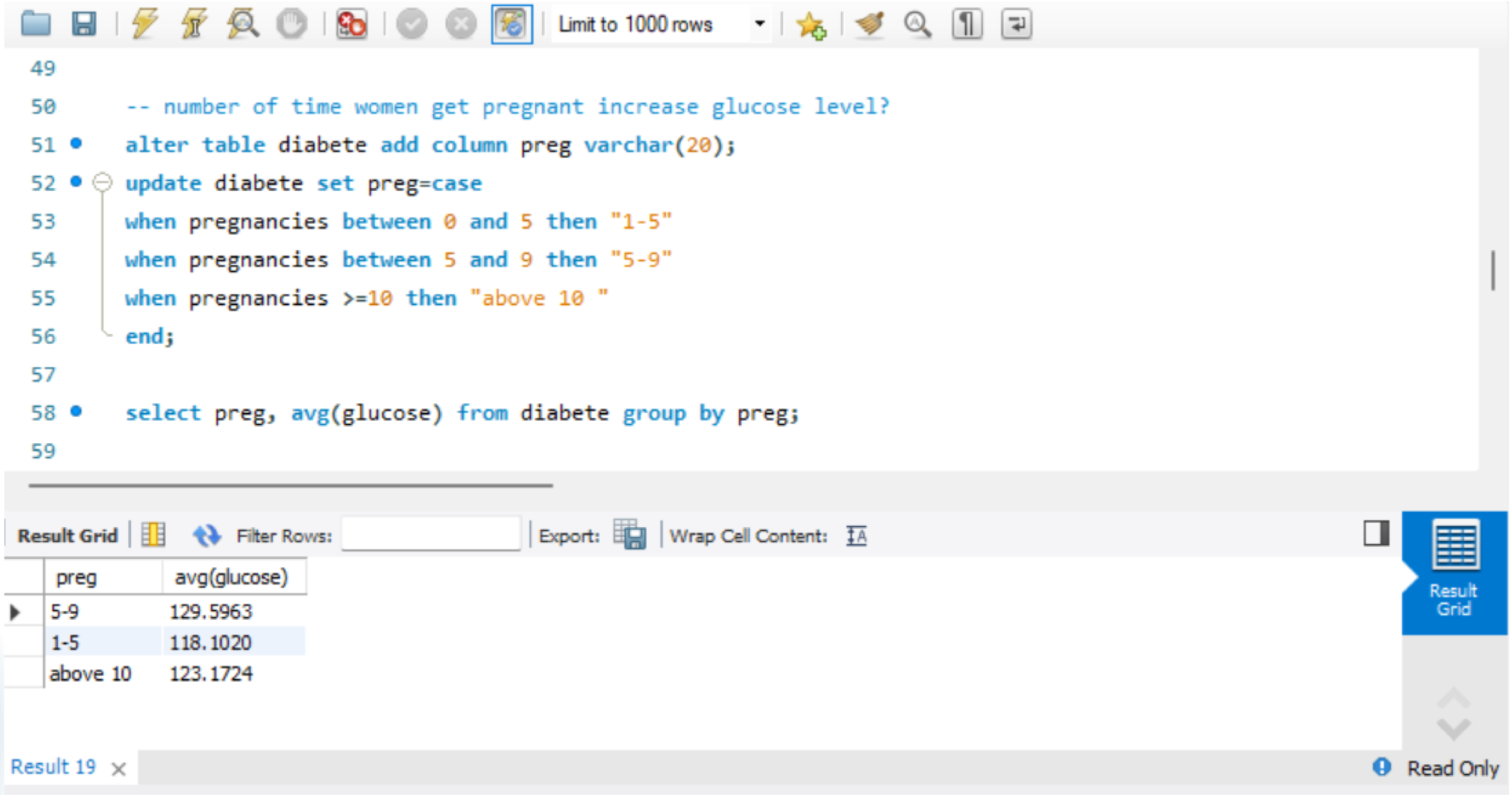
- To ascertain the relationship between blood pressure and diabetes



```
 /*to ascertain the relationship between blood pressure  and diabetes*/
 alter table diabete add column diastolic_blood_pressure varchar(25);
 update diabete set diastolic_blood_pressure= CASE
          WHEN  bloodpressure between 60 and 80 THEN 'normal'
          WHEN bloodpressure BETWEEN 80 AND 89 THEN 'stage_1_hypertension'
          WHEN bloodpressure BETWEEN 90 AND 120 THEN 'stage_2_hypertension'
          WHEN bloodpressure >= 120 THEN 'hypertensive_crisis'
          when bloodpressure <60 then "low hypertension"
    END;
select diastolic_blood_pressure, count(result) as total
from diabete where result="diabetic" group by diastolic_blood_pressure;
```

diastolic_blood_pressure	total
normal	159
low hypertension	32
stage_2_hypertension	29
stage_1_hypertension	48

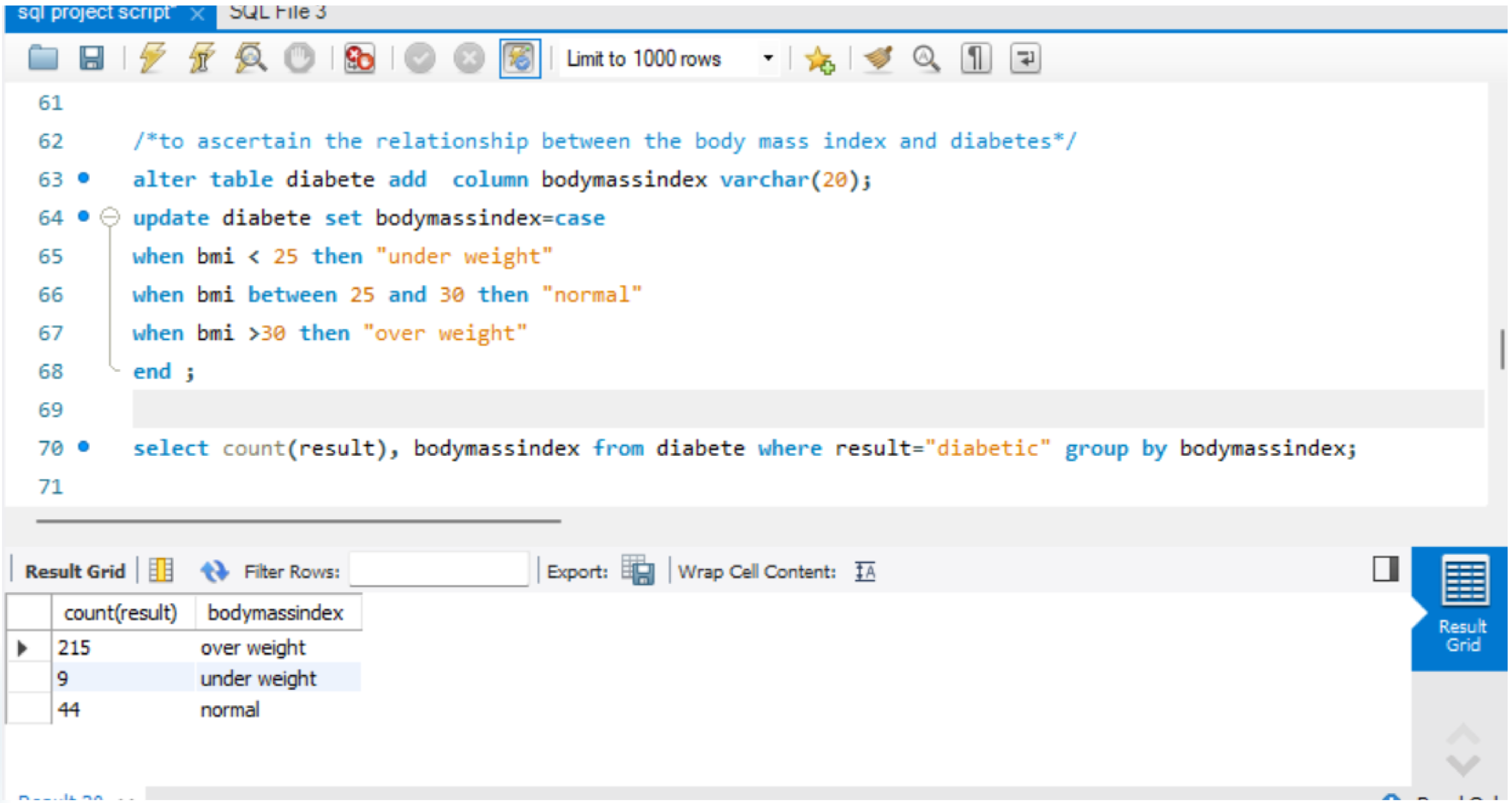
- # Number of time women get pregnant increase glucose level?



```
-- number of time women get pregnant increase glucose level?
alter table diabete add column preg varchar(20);
update diabete set preg=case
when pregnancies between 0 and 5 then "1-5"
when pregnancies between 5 and 9 then "5-9"
when pregnancies >=10 then "above 10 "
end;

select preg, avg(glucose) from diabete group by preg;
```

preg	avg(glucose)
5-9	129.5963
1-5	118.1020
above 10	123.1724

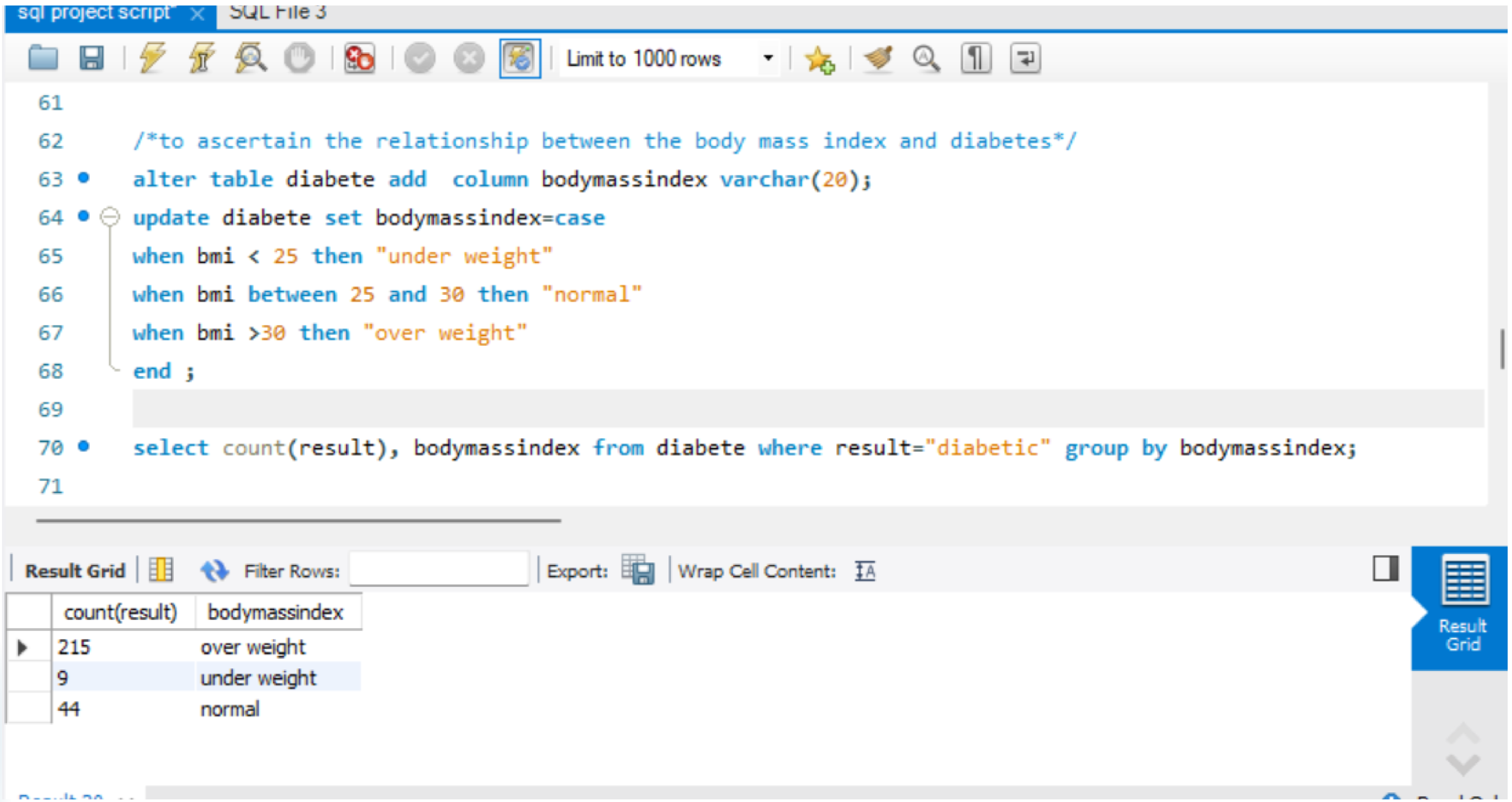
- To ascertain the relationship between the body mass index and diabetes



```sql

/*to ascertain the relationship between the body mass index and diabetes*/
alter table diabete add  column bodymassindex varchar(20);
update diabete set bodymassindex=case
when bmi < 25 then "under weight"
when bmi between 25 and 30 then "normal"
when bmi >30 then "over weight"
end ;

select count(result), bodymassindex from diabete where result="diabetic" group by bodymassindex;

```

count(result)	bodymassindex
215	over weight
9	under weight
44	normal

- To ascertain the relationship between age_range and diabetes



```
/*to ascertain the relationship between the body mass index and diabetes*/
alter table diabete add  column bodymassindex varchar(20);
update diabete set bodymassindex=case
when bmi < 25 then "under weight"
when bmi between 25 and 30 then "normal"
when bmi >30 then "over weight"
end ;

select count(result), bodymassindex from diabete where result="diabetic" group by bodymassindex;
```

count(result)	bodymassindex
215	over weight
9	under weight
44	normal