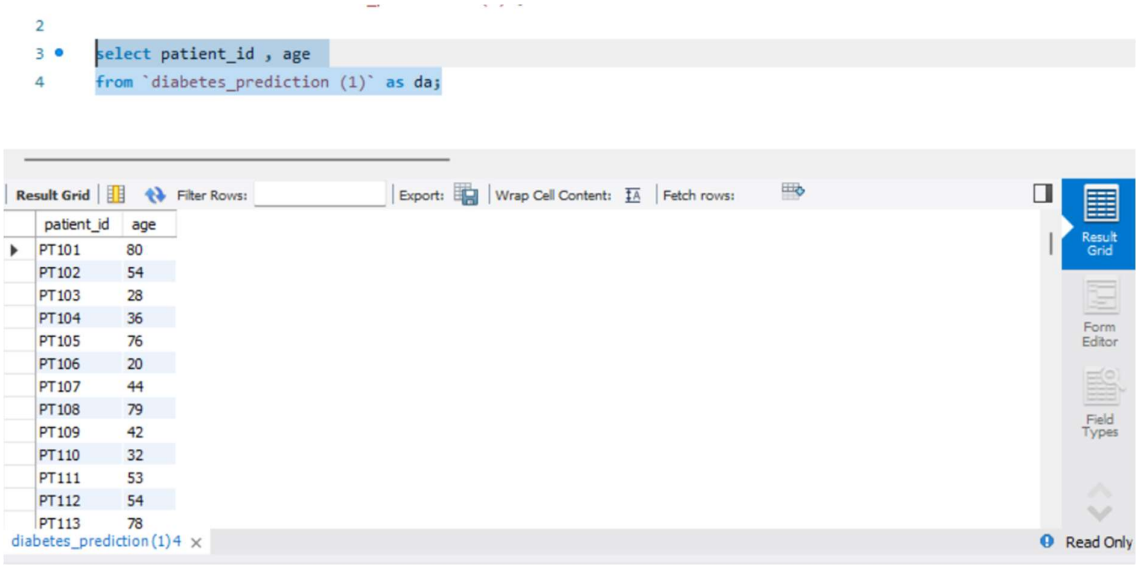
Healthcare Analytics

SQL Project

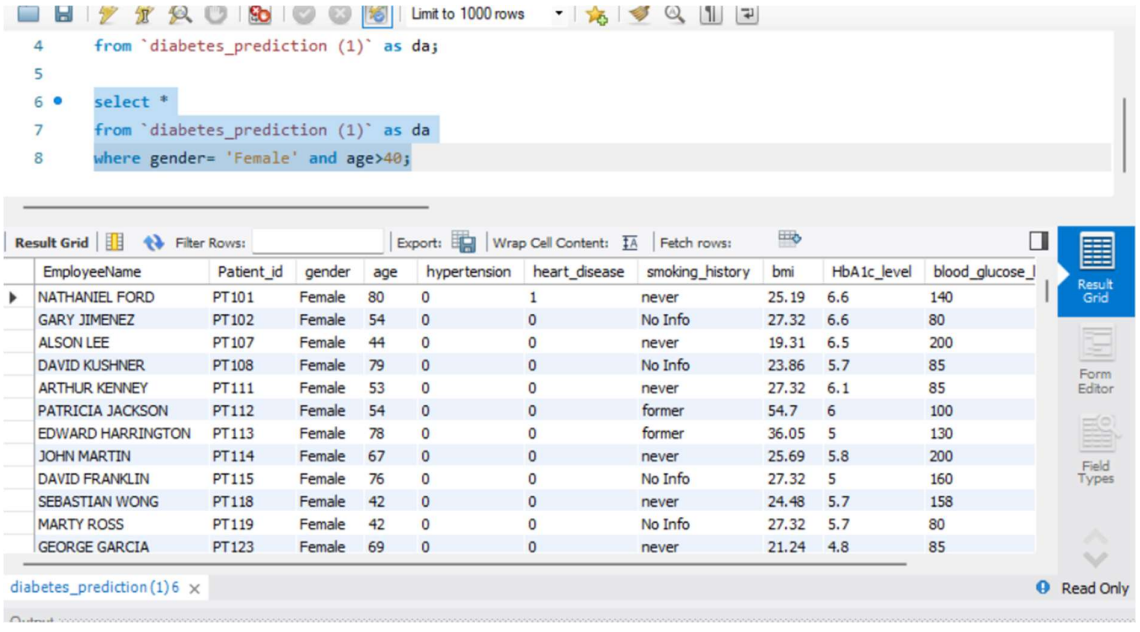
ANUJ SINGH

```
select patient_id , age
from `diabetes_prediction (1)` as da;
```



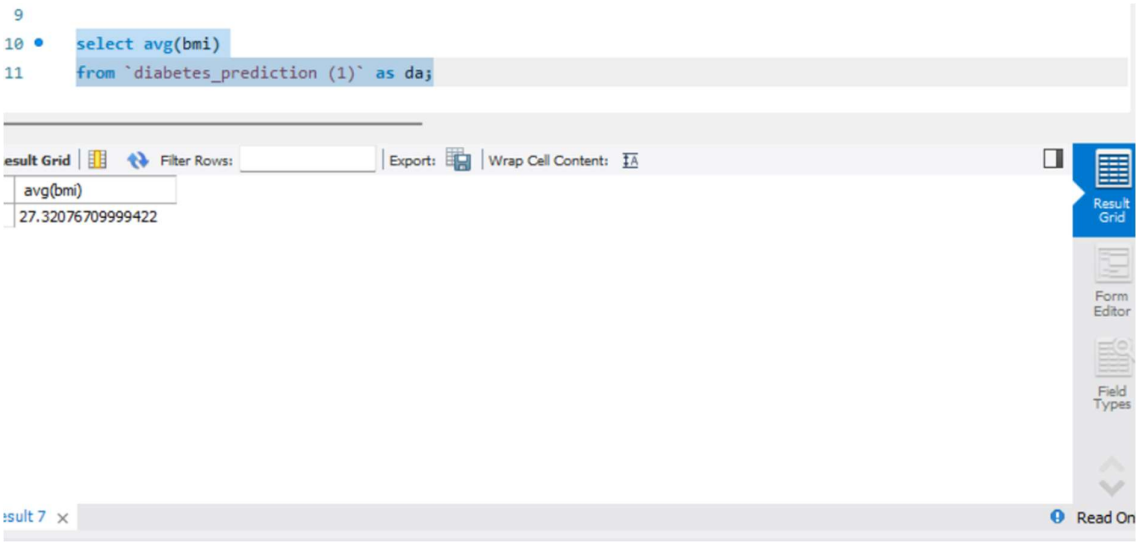
patient_id	age
PT101	80
PT102	54
PT103	28
PT104	36
PT105	76
PT106	20
PT107	44
PT108	79
PT109	42
PT110	32
PT111	53
PT112	54
PT113	78

```
select *
from `diabetes_prediction (1)` as da
where gender= 'Female' and age>40;
```



EmployeeName	Patient_id	gender	age	hypertension	heart_disease	smoking_history	bmi	HbA1c_level	blood_glucose_l
NATHANIEL FORD	PT101	Female	80	0	1	never	25.19	6.6	140
GARY JIMENEZ	PT102	Female	54	0	0	No Info	27.32	6.6	80
ALSON LEE	PT107	Female	44	0	0	never	19.31	6.5	200
DAVID KUSHNER	PT108	Female	79	0	0	No Info	23.86	5.7	85
ARTHUR KENNEY	PT111	Female	53	0	0	never	27.32	6.1	85
PATRICIA JACKSON	PT112	Female	54	0	0	former	54.7	6	100
EDWARD HARRINGTON	PT113	Female	78	0	0	former	36.05	5	130
JOHN MARTIN	PT114	Female	67	0	0	never	25.69	5.8	200
DAVID FRANKLIN	PT115	Female	76	0	0	No Info	27.32	5	160
SEBASTIAN WONG	PT118	Female	42	0	0	never	24.48	5.7	158
MARTY ROSS	PT119	Female	42	0	0	No Info	27.32	5.7	80
GEORGE GARCIA	PT123	Female	69	0	0	never	21.24	4.8	85

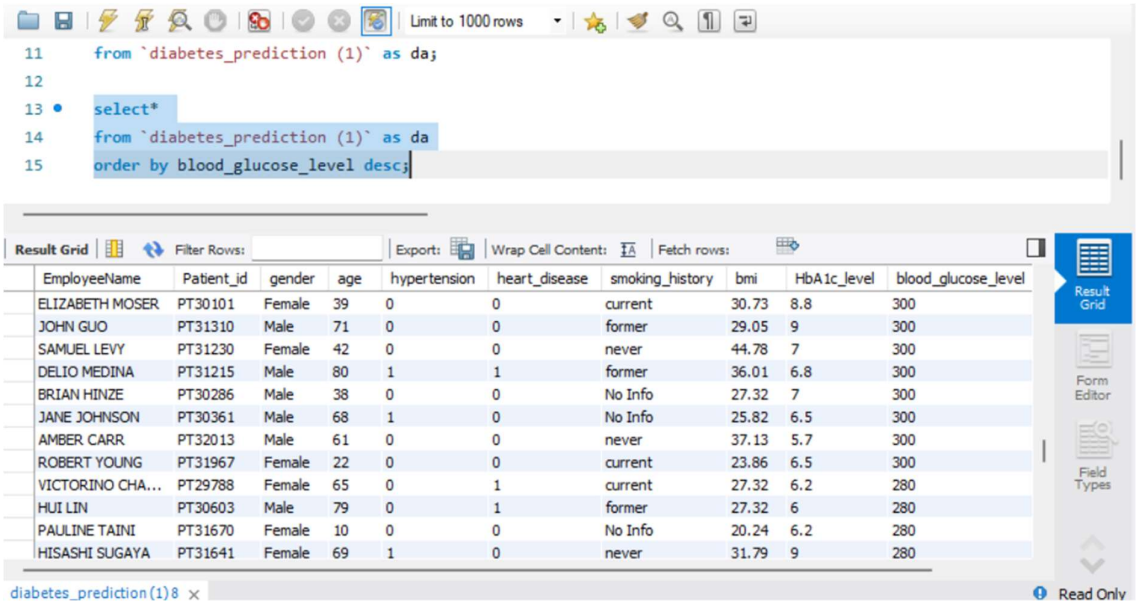
```
select avg(bmi)
from `diabetes_prediction (1)` as da;
```



select*

from `diabetes_prediction (1)` as da

order by blood_glucose_level desc;



select EmployeeName,Patient_id,hypertension,diabetes

from `diabetes_prediction (1)` as da

where hypertension=1 or diabetes=1;

```
16
17 •  select EmployeeName,Patient_id,hypertension,diabetes
18    from `diabetes_prediction (1)` as da
19    where hypertension=1 or diabetes=1;
```

Result Grid | Filter Rows: | Export: | Wrap Cell Content: | Fetch rows:

EmployeeName	Patient_id	hypertension	diabetes
PATRICK GARDNER	PT105	1	0
ALSON LEE	PT107	0	1
JOHN HANLEY	PT127	0	1
DENISE SCHMITT	PT129	1	0
JONES WONG	PT139	1	1
MICHAEL THOMPSON	PT141	0	1
THOMAS SIRAGUSA	PT143	1	0
DARRYL HUNTER	PT154	0	1
RAY CRAWFORD	PT155	1	0
KEVIN CASHMAN	PT156	0	1
AI-KYUNG CHUNG	PT160	0	1
KENNETH SMITH	PT161	1	0
ROBERT WINSLOW	PT182	0	1

Result Grid | Form Editor | Field Types

diabetes_prediction (1) 10 ×

Read Only

select count(*)

from `diabetes_prediction (1)` as da

where heart_disease=1;

```
21 •  select count(*)
22    from `diabetes_prediction (1)` as da
23    where heart_disease=1;
24
```

Result Grid | Filter Rows: | Export: | Wrap Cell Content:

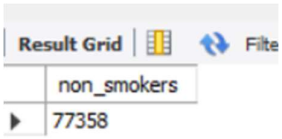
count(*)
3942

Result Grid | Form Editor | Field Types

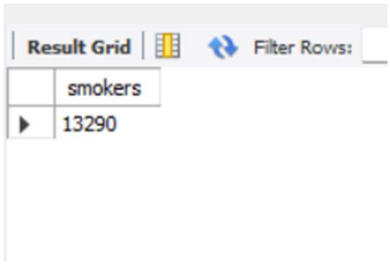
select SUM(patient_no) as non_smokers

from (

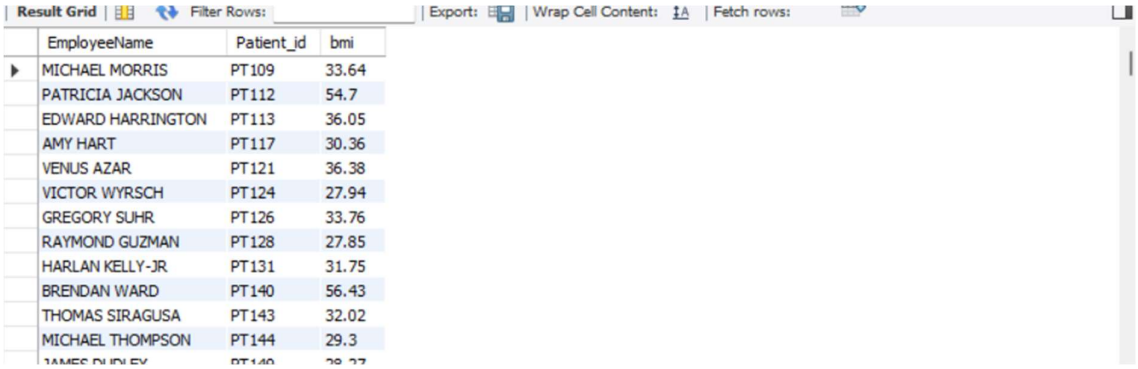
```
select smoking_history as typeofsmoker,count(*) as patient_no
from `diabetes_prediction (1)`
group by typeofsmoker
) as smokingdata where typeofsmoker IN ('no Info', 'not current', 'never') ;
```




```
select  SUM(patient_no) as smokers
from (
select smoking_history as typeofsmoker,count(*) as patient_no
from `diabetes_prediction (1)`
group by typeofsmoker
) as smokingdata where typeofsmoker IN ('ever', 'current') ;
```

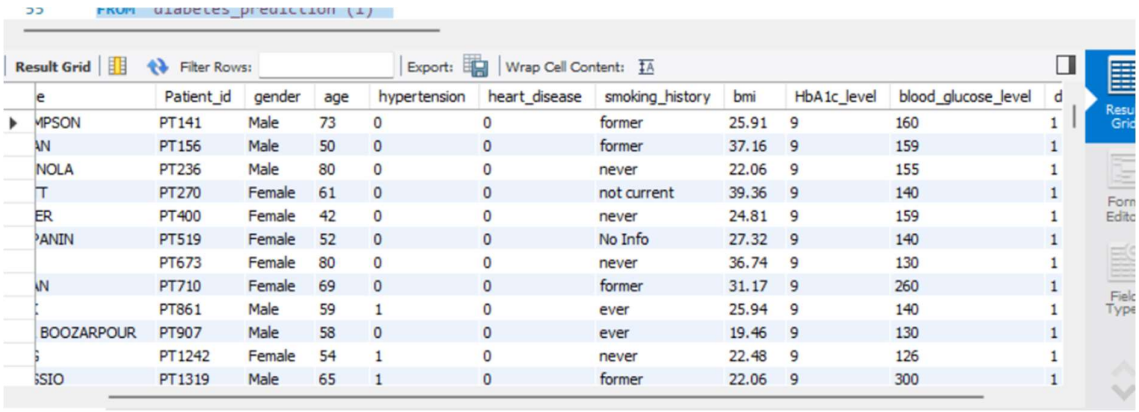



```
select EmployeeName, Patient_id,bmi
from `diabetes_prediction (1)` as original,(
select avg(bmi) as newbmi
from `diabetes_prediction (1)`
) as derived
where original.bmi>derived.newbmi;
```



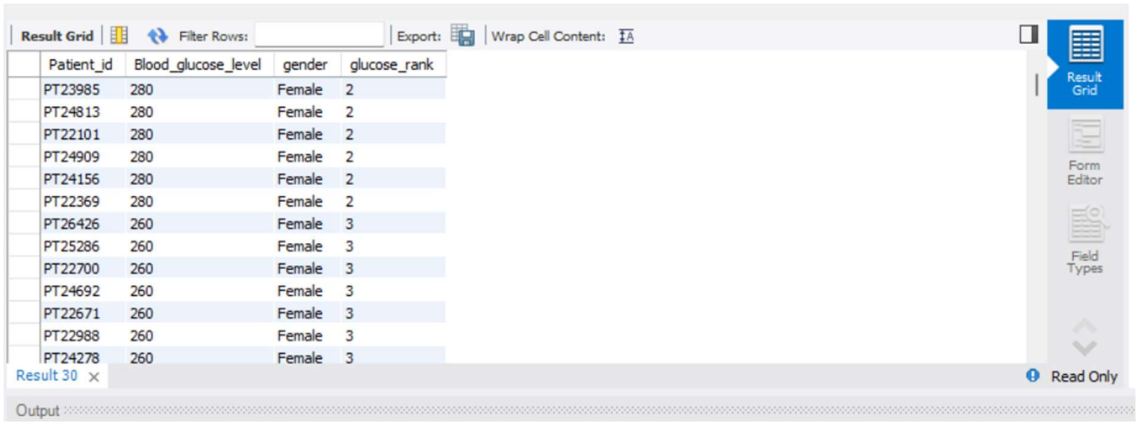
EmployeeName	Patient_id	bmi
MICHAEL MORRIS	PT109	33.64
PATRICIA JACKSON	PT112	54.7
EDWARD HARRINGTON	PT113	36.05
AMY HART	PT117	30.36
VENUS AZAR	PT121	36.38
VICTOR WYRSCH	PT124	27.94
GREGORY SUHR	PT126	33.76
RAYMOND GUZMAN	PT128	27.85
HARLAN KELLY-JR	PT131	31.75
BRENDAN WARD	PT140	56.43
THOMAS SIRAGUSA	PT143	32.02
MICHAEL THOMPSON	PT144	29.3

```
SELECT *
FROM `diabetes_prediction (1)`
WHERE HbA1c_level = (SELECT MAX(HbA1c_level) FROM `diabetes_prediction (1)`)
UNION
SELECT *
FROM `diabetes_prediction (1)`
WHERE HbA1c_level = (SELECT MIN(HbA1c_level) FROM `diabetes_prediction (1)`);
```



e	Patient_id	gender	age	hypertension	heart_disease	smoking_history	bmi	HbA1c_level	blood_glucose_level	d
MPSON	PT141	Male	73	0	0	former	25.91	9	160	1
AN	PT156	Male	50	0	0	former	37.16	9	159	1
NOLA	PT236	Male	80	0	0	never	22.06	9	155	1
T	PT270	Female	61	0	0	not current	39.36	9	140	1
ER	PT400	Female	42	0	0	never	24.81	9	159	1
ANIN	PT519	Female	52	0	0	No Info	27.32	9	140	1
	PT673	Female	80	0	0	never	36.74	9	130	1
N	PT710	Female	69	0	0	former	31.17	9	260	1
	PT861	Male	59	1	0	ever	25.94	9	140	1
BOOZARPOUR	PT907	Male	58	0	0	ever	19.46	9	130	1
	PT1242	Female	54	1	0	never	22.48	9	126	1
SIO	PT1319	Male	65	1	0	former	22.06	9	300	1

```
select Patient_id,Blood_glucose_level,gender,
dense_rank() over (partition by gender order by Blood_glucose_level desc) as glucose_rank
 FROM `diabetes_prediction (1)`
```

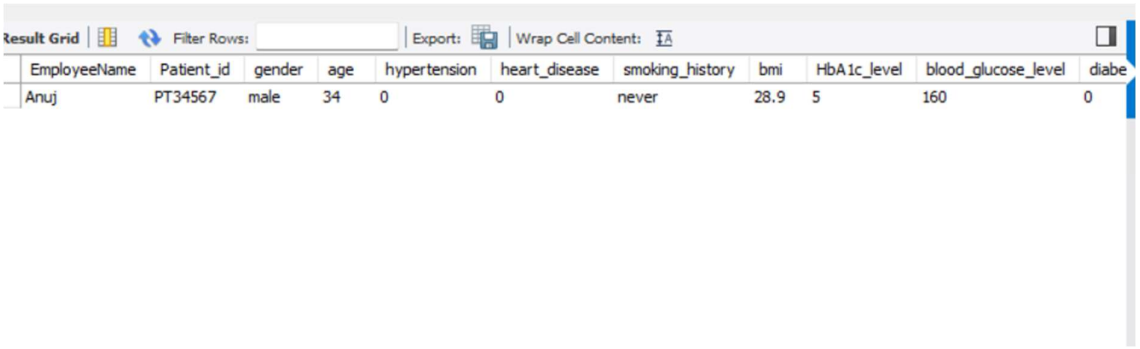


Patient_id	Blood_glucose_level	gender	glucose_rank
PT23985	280	Female	2
PT24813	280	Female	2
PT22101	280	Female	2
PT24909	280	Female	2
PT24156	280	Female	2
PT22369	280	Female	2
PT26426	260	Female	3
PT25286	260	Female	3
PT22700	260	Female	3
PT24692	260	Female	3
PT22671	260	Female	3
PT22988	260	Female	3
PT24278	260	Female	3


```
SET SQL_SAFE_UPDATES = 0;
update `diabetes_prediction (1)`
set smoking_history ='Ex-smoker'
where age>50;
```

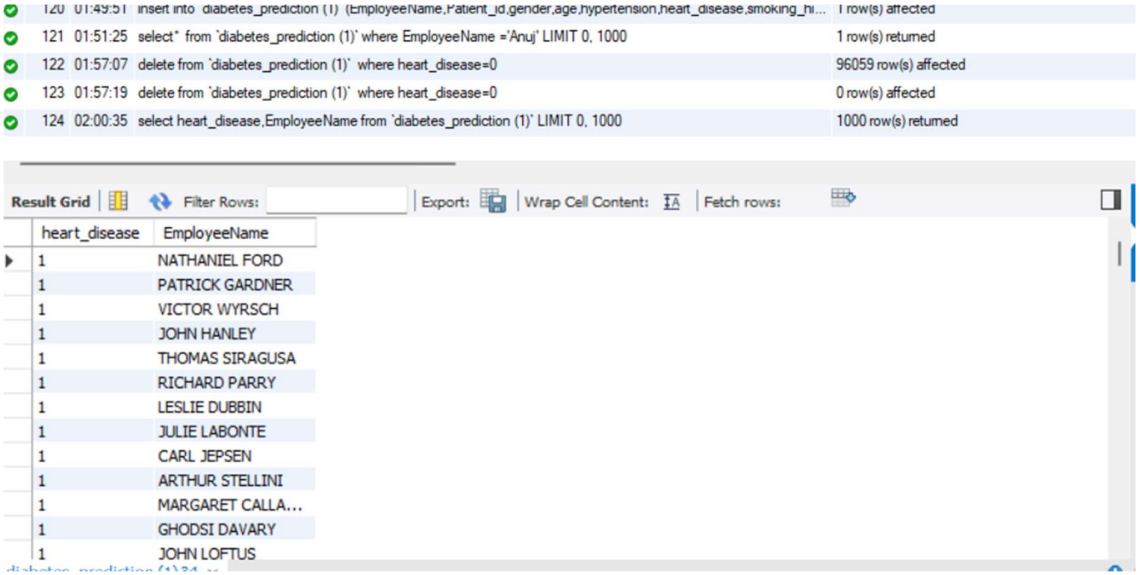
EmployeeName	age	smoking_history
NATHANIEL FORD	80	Ex-smoker
GARY JIMENEZ	54	Ex-smoker
PATRICK GARDNER	76	Ex-smoker
DAVID KUSHNER	79	Ex-smoker
ARTHUR KENNEY	53	Ex-smoker
PATRICIA JACKSON	54	Ex-smoker
EDWARD HARRINGTON	78	Ex-smoker
JOHN MARTIN	67	Ex-smoker
DAVID FRANKLIN	76	Ex-smoker
RICHARD CORRIEA	78	Ex-smoker
GEORGE GARCIA	69	Ex-smoker
VICTOR WYRSCH	72	Ex-smoker
JOHN HANLEY	67	Ex-smoker

```
insert into `diabetes_prediction (1)`
(EmployeeName,Patient_id,gender,age,hypertension,heart_disease,smoking_history,bmi,HbA1c_level,blood_glucose_level,diabetes)
values('Anuj','PT34567','male',34,0,0,'never',28.9,5,160,0);


select*
from `diabetes_prediction (1)`
where EmployeeName ='Anuj'
```



EmployeeName	Patient_id	gender	age	hypertension	heart_disease	smoking_history	bmi	HbA1c_level	blood_glucose_level	diabe
Anuj	PT34567	male	34	0	0	never	28.9	5	160	0

```
delete from `diabetes_prediction (1)`
where heart_disease=0;


select heart_disease,EmployeeName
from `diabetes_prediction (1)`
```



120	01:49:51	insert into `diabetes_prediction (1)` (EmployeeName,Patient_id,gender,age,hypertension,heart_disease,smoking_hi...	1 row(s) affected
121	01:51:25	select * from `diabetes_prediction (1)` where EmployeeName ='Anuj' LIMIT 0, 1000	1 row(s) returned
122	01:57:07	delete from `diabetes_prediction (1)` where heart_disease=0	96059 row(s) affected
123	01:57:19	delete from `diabetes_prediction (1)` where heart_disease=0	0 row(s) affected
124	02:00:35	select heart_disease,EmployeeName from `diabetes_prediction (1)` LIMIT 0, 1000	1000 row(s) returned

heart_disease	EmployeeName
1	NATHANIEL FORD
1	PATRICK GARDNER
1	VICTOR WYRSCH
1	JOHN HANLEY
1	THOMAS SIRAGUSA
1	RICHARD PARRY
1	LESLIE DUBBIN
1	JULIE LABONTE
1	CARL JEPSEN
1	ARTHUR STELLINI
1	MARGARET CALLA...
1	GHODSI DAVARY
1	JOHN LOFTUS

```
select EmployeeName,Patient_id,hypertension,diabetes
from `diabetes_prediction (1)`
where hypertension=1

EXCEPT

select EmployeeName,Patient_id,hypertension,diabetes
from `diabetes_prediction (1)`
where diabetes=1;
```

EmployeeName	Patient_id	hypertension	diabetes
PATRICK GARDNER	PT105	1	0
THOMAS SIRAGUSA	PT143	1	0
LESLIE DUBBIN	PT220	1	0
LEONARDO FERMIN	PT600	1	0
CHERYL ADAMS	PT772	1	0
CHRISTOPHER CANNING	PT842	1	0
LAWRENCE STRINGER	PT1250	1	0
EDWARD LOR	PT1943	1	0
MARTA MCGOVERN	PT2380	1	0
FANTA SESAY	PT2390	1	0
CHRISTOPHER NOCON	PT2391	1	0
KRISTEN HOADLEY	PT2793	1	0
TIM MCNEIL	PT3084	1	0