SQL ASSIGGNMENT

1.Create a database

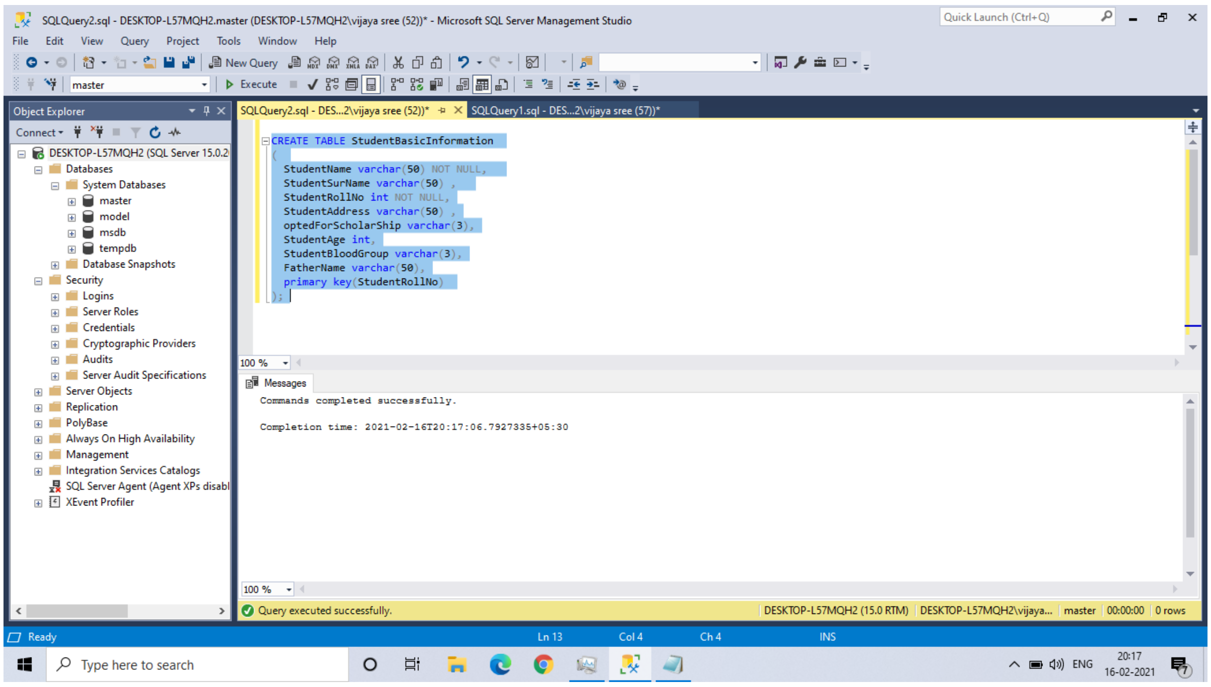
Query

```
CREATE DATABASE Students
```

2.Create table StudentBasicInformation

```
a)CREATE TABLE StudentBasicInformation
(
  StudentName varchar(50) NOT NULL,
  StudentSurName varchar(50) ,
  StudentRollNo int NOT NULL,
  StudentAddress varchar(50) ,
  optedForScholarShip varchar(3),
  StudentAge int,
  StudentBloodGroup varchar(3),
  FatherName varchar(50),
  primary key(StudentRollNo)
);
```

Output screenshot:



```
CREATE TABLE StudentBasicInformation
(
  StudentName varchar(50) NOT NULL,
  StudentSurName varchar(50) ,
  StudentRollNo int NOT NULL,
  StudentAddress varchar(50) ,
  optedForScholarShip varchar(3),
  StudentAge int,
  StudentBloodGroup varchar(3),
  FatherName varchar(50),
  primary key(StudentRollNo)
);
```

```
Commands completed successfully.

Completion time: 2021-02-16T20:17:06.7927335+05:30
```

Query executed successfully.

b)Create Table StudentAdmissionPaymentDetails

CREATE TABLE StudentAdmissionPaymentDetails

(

  StudentRollNo int not null,

  AmountPaid int ,

  AmountBalance int,

  EnrolledDate int,

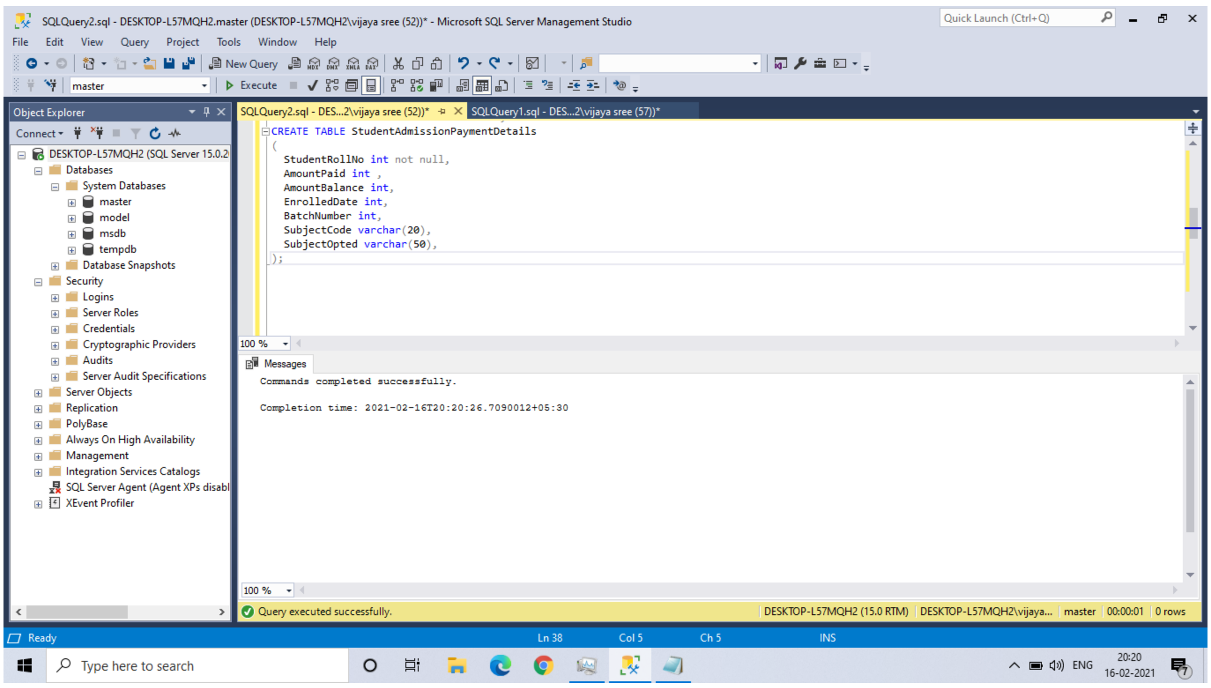
  BatchNumber int,

  SubjectCode varchar(20),

  SubjectOpted varchar(50),

);

Output Screenshot:



```
CREATE TABLE StudentAdmissionPaymentDetails
(
  StudentRollNo int not null,
  AmountPaid int ,
  AmountBalance int,
  EnrolledDate int,
  BatchNumber int,
  SubjectCode varchar(20),
  SubjectOpted varchar(50),
);
```

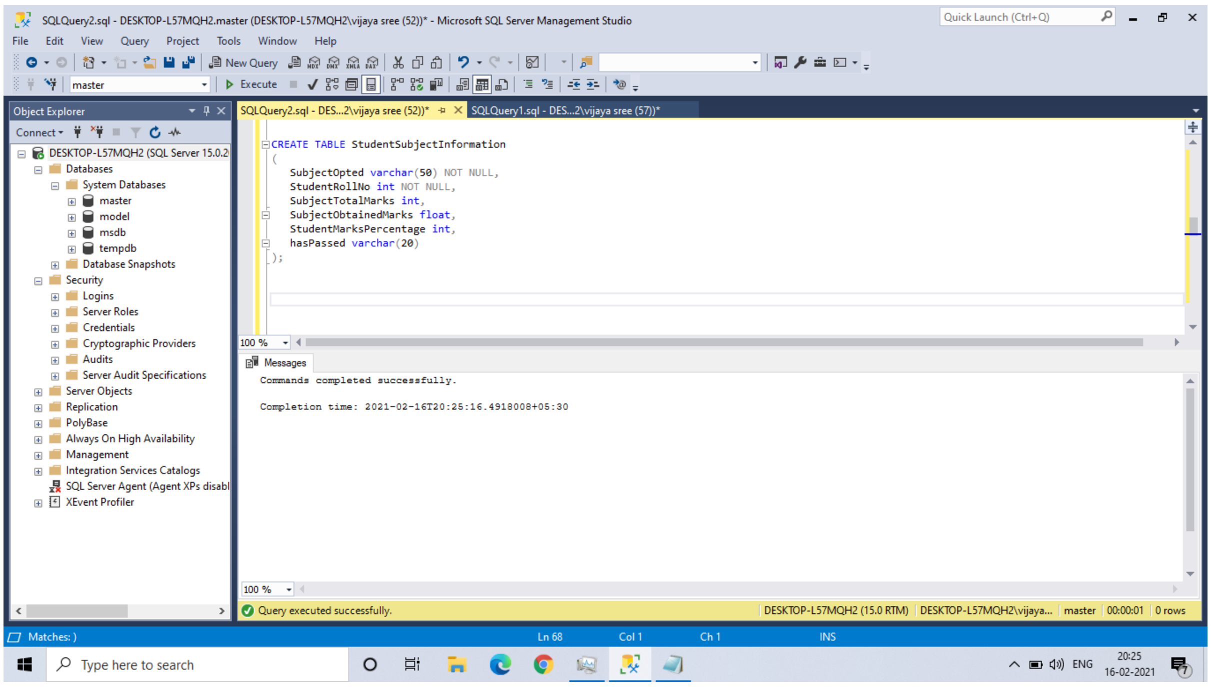
```
Commands completed successfully.

Completion time: 2021-02-16T20:20:26.7090012+05:30
```

Query executed successfully.

c)Create Table StudentSubjectInformation:

```
CREATE TABLE StudentSubjectInformation
(
  SubjectOpted varchar(50) NOT NULL,
  StudentRollNo int NOT NULL,
  SubjectTotalMarks int,
  SubjectObtainedMarks float,
  StudentMarksPercentage int,
  hasPassed varchar(20)
);
```

Output Screenshot:



```
CREATE TABLE StudentSubjectInformation
(
   SubjectOpted varchar(50) NOT NULL,
   StudentRollNo int NOT NULL,
   SubjectTotalMarks int,
   SubjectObtainedMarks float,
   StudentMarksPercentage int,
   hasPassed varchar(20)
);
```

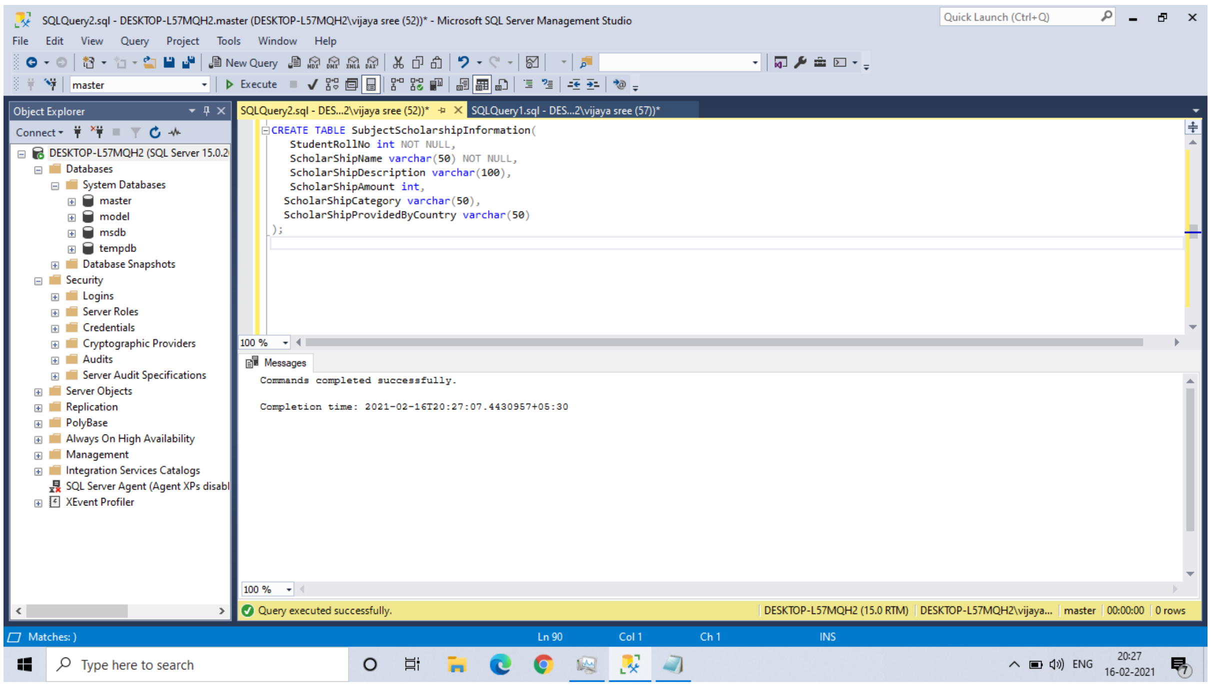
```
Commands completed successfully.

Completion time: 2021-02-16T20:25:16.4918008+05:30
```

Query executed successfully.

d)Create Table SubjectScholarshipInformation:

```
CREATE TABLE SubjectScholarshipInformation(
   StudentRollNo int NOT NULL,
   ScholarShipName varchar(50) NOT NULL,
   ScholarShipDescription varchar(100),
   ScholarShipAmount int,
  ScholarShipCategory varchar(50),
  ScholarShipProvidedByCountry varchar(50)
);
```

Output Screenshot:



```
CREATE TABLE SubjectScholarshipInformation(
   StudentRollNo int NOT NULL,
   ScholarShipName varchar(50) NOT NULL,
   ScholarShipDescription varchar(100),
   ScholarShipAmount int,
  ScholarShipCategory varchar(50),
  ScholarShipProvidedByCountry varchar(50)
);
```

```
Commands completed successfully.

Completion time: 2021-02-16T20:27:07.4430957+05:30
```

Query executed successfully.

3.

a)Insert into Table StudentBasicInformation:

```
insert into StudentBasicInformation
values('Ravi','linga',1112,'delhi','yes',22,'A+','krishna');

insert into StudentBasicInformation
values('john','doe',1113,'Hyderabad','no',21,'A-','Mukesh');

insert into StudentBasicInformation
values('peter','parker',1114,'delhi','yes',21,'B+','Deshmukh');

insert into StudentBasicInformation
values('bae','suzy',1115,'bangalore','no',21,'B+','Ramana');

insert into StudentBasicInformation
values('paris','Allen',1116,'delhi','yes',22,'A-','Rakesh');

insert into StudentBasicInformation
values('baker','hannah',1117,'chennai','no',22,'O+','Supreeth');

insert into StudentBasicInformation
values('Ravi','kishore',1118,'delhi','yes',22,'O-','Madhav');
```

insert into StudentBasicInformation values('kareena','kappor',1119,'Hyderabad','no',22,'O+','Rithvik');

insert into StudentBasicInformation values('Ranbir','kapoor',1120,'delhi','yes',22,'AB+','Sumedh');

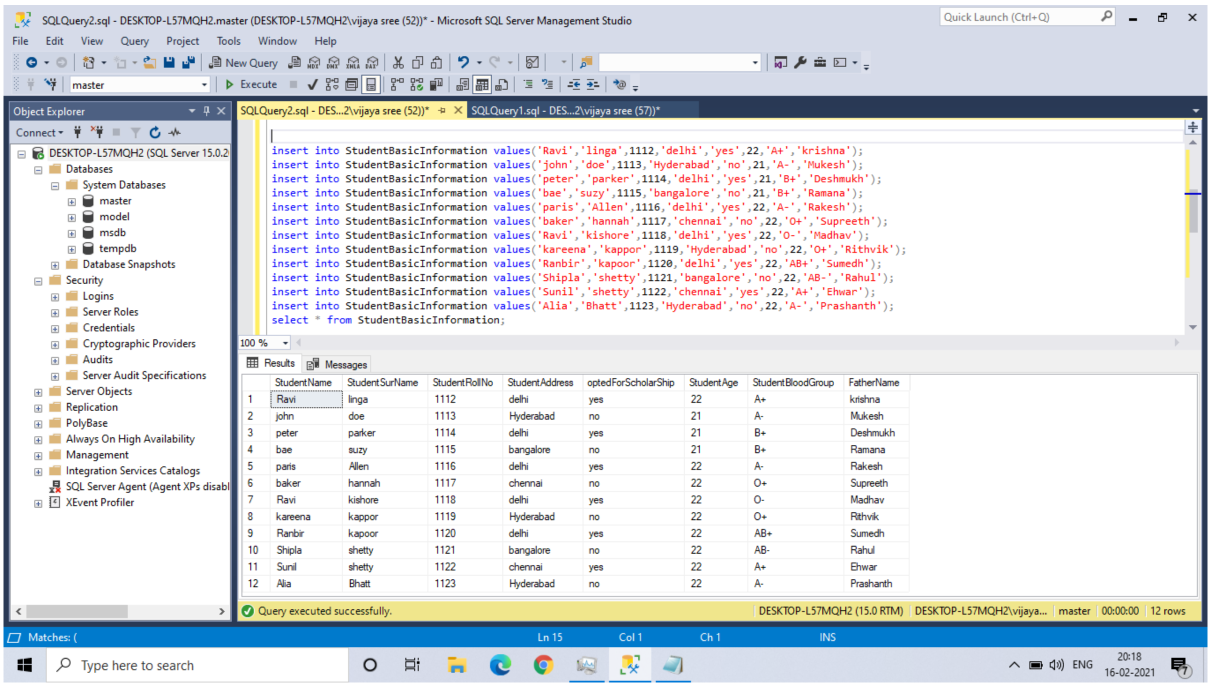
insert into StudentBasicInformation values('Shipla','shetty',1121,'bangalore','no',22,'AB-','Rahul');

insert into StudentBasicInformation values('Sunil','shetty',1122,'chennai','yes',22,'A+','Ehwar');

insert into StudentBasicInformation values('Alia','Bhatt',1123,'Hyderabad','no',22,'A-','Prashanth');

select * from StudentBasicInformation;

Output screenshot:



```
insert into StudentBasicInformation values('Ravi','linga',1112,'delhi','yes',22,'A+','krishna');
insert into StudentBasicInformation values('john','doe',1113,'Hyderabad','no',21,'A-','Mukesh');
insert into StudentBasicInformation values('peter','parker',1114,'delhi','yes',21,'B+','Deshmukh');
insert into StudentBasicInformation values('bae','suzy',1115,'bangalore','no',21,'B+','Ramana');
insert into StudentBasicInformation values('paris','Allen',1116,'delhi','yes',22,'A-','Rakesh');
insert into StudentBasicInformation values('baker','hannah',1117,'chennai','no',22,'O+','Supreeth');
insert into StudentBasicInformation values('Ravi','kishore',1118,'delhi','yes',22,'O-','Madhav');
insert into StudentBasicInformation values('kareena','kappor',1119,'Hyderabad','no',22,'O+','Rithvik');
insert into StudentBasicInformation values('Ranbir','kapoor',1120,'delhi','yes',22,'AB+','Sumedh');
insert into StudentBasicInformation values('Shipla','shetty',1121,'bangalore','no',22,'AB-','Rahul');
insert into StudentBasicInformation values('Sunil','shetty',1122,'chennai','yes',22,'A+','Ehwar');
insert into StudentBasicInformation values('Alia','Bhatt',1123,'Hyderabad','no',22,'A-','Prashanth');
select * from StudentBasicInformation;
```

	StudentName	StudentSurName	StudentRollNo	StudentAddress	optedForScholarShip	StudentAge	StudentBloodGroup	FatherName
1	Ravi	linga	1112	delhi	yes	22	A+	krishna
2	john	doe	1113	Hyderabad	no	21	A-	Mukesh
3	peter	parker	1114	delhi	yes	21	B+	Deshmukh
4	bae	suzy	1115	bangalore	no	21	B+	Ramana
5	paris	Allen	1116	delhi	yes	22	A-	Rakesh
6	baker	hannah	1117	chennai	no	22	O+	Supreeth
7	Ravi	kishore	1118	delhi	yes	22	O-	Madhav
8	kareena	kappor	1119	Hyderabad	no	22	O+	Rithvik
9	Ranbir	kapoor	1120	delhi	yes	22	AB+	Sumedh
10	Shipla	shetty	1121	bangalore	no	22	AB-	Rahul
11	Sunil	shetty	1122	chennai	yes	22	A+	Ehwar
12	Alia	Bhatt	1123	Hyderabad	no	22	A-	Prashanth

```
Query executed successfully.    DESKTOP-L57MQH2 (15.0 RTM) | DESKTOP-L57MQH2\vijaya... | master | 00:00:00 | 12 rows
```

b)Insert into Table StudentAdmissionPaymentDetails

insert into StudentAdmissionPaymentDetails values(1112,10000,12000,11-02-2021,2021,'IT737','Information technology');

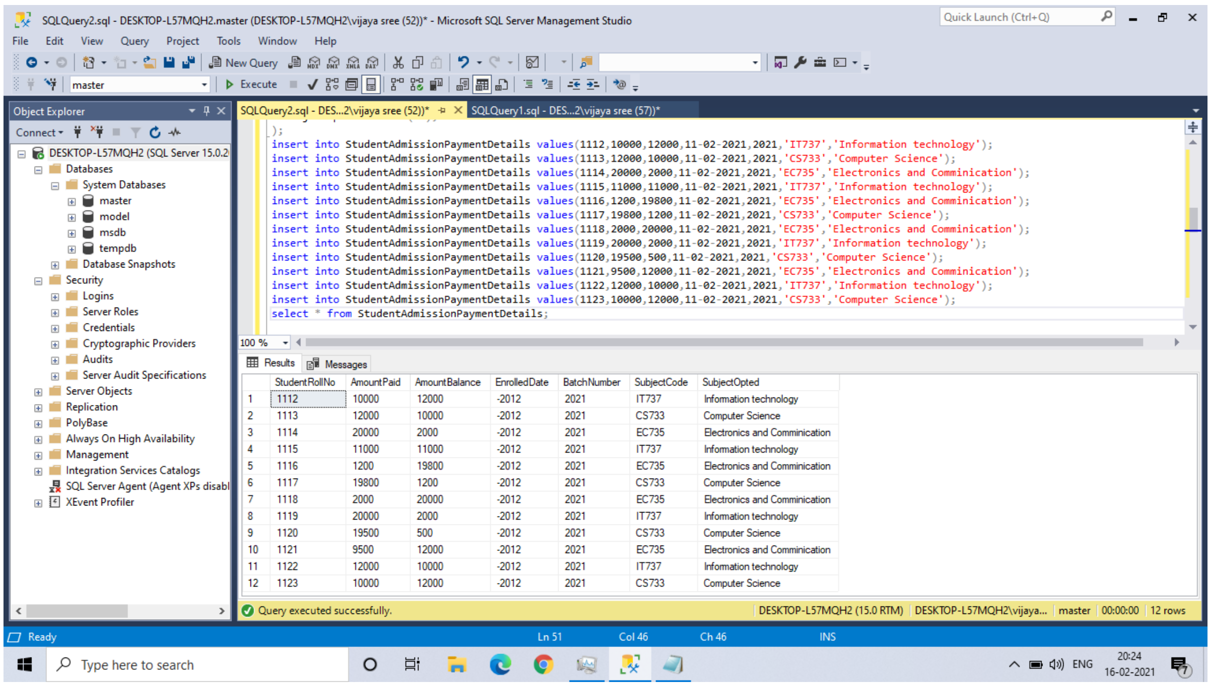
```
insert into StudentAdmissionPaymentDetails
values(1113,12000,10000,11-02-2021,2021,'CS733','Computer
Science');

insert into StudentAdmissionPaymentDetails
values(1114,20000,2000,11-02-2021,2021,'EC735','Electronics and
Comminication');

insert into StudentAdmissionPaymentDetails
values(1115,11000,11000,11-02-2021,2021,'IT737','Information
technology');

insert into StudentAdmissionPaymentDetails
values(1116,1200,19800,11-02-2021,2021,'EC735','Electronics and
Comminication');

insert into StudentAdmissionPaymentDetails
values(1117,19800,1200,11-02-2021,2021,'CS733','Computer
Science');

insert into StudentAdmissionPaymentDetails
values(1118,2000,20000,11-02-2021,2021,'EC735','Electronics and
Comminication');

insert into StudentAdmissionPaymentDetails
values(1119,20000,2000,11-02-2021,2021,'IT737','Information
technology');

insert into StudentAdmissionPaymentDetails
values(1120,19500,500,11-02-2021,2021,'CS733','Computer
Science');

insert into StudentAdmissionPaymentDetails
values(1121,9500,12000,11-02-2021,2021,'EC735','Electronics and
Comminication');
```

insert into StudentAdmissionPaymentDetails values(1122,12000,10000,11-02-2021,2021,'IT737','Information technology');

insert into StudentAdmissionPaymentDetails values(1123,10000,12000,11-02-2021,2021,'CS733','Computer Science');

select * from StudentAdmissionPaymentDetails;

Output Screenshot:



```
);
insert into StudentAdmissionPaymentDetails values(1112,10000,12000,11-02-2021,2021,'IT737','Information technology');
insert into StudentAdmissionPaymentDetails values(1113,12000,10000,11-02-2021,2021,'CS733','Computer Science');
insert into StudentAdmissionPaymentDetails values(1114,20000,2000,11-02-2021,2021,'EC735','Electronics and Comminication');
insert into StudentAdmissionPaymentDetails values(1115,11000,11000,11-02-2021,2021,'IT737','Information technology');
insert into StudentAdmissionPaymentDetails values(1116,1200,19800,11-02-2021,2021,'EC735','Electronics and Comminication');
insert into StudentAdmissionPaymentDetails values(1117,19800,1200,11-02-2021,2021,'CS733','Computer Science');
insert into StudentAdmissionPaymentDetails values(1118,2000,20000,11-02-2021,2021,'EC735','Electronics and Comminication');
insert into StudentAdmissionPaymentDetails values(1119,20000,2000,11-02-2021,2021,'IT737','Information technology');
insert into StudentAdmissionPaymentDetails values(1120,19500,500,11-02-2021,2021,'CS733','Computer Science');
insert into StudentAdmissionPaymentDetails values(1121,9500,12000,11-02-2021,2021,'EC735','Electronics and Comminication');
insert into StudentAdmissionPaymentDetails values(1122,12000,10000,11-02-2021,2021,'IT737','Information technology');
insert into StudentAdmissionPaymentDetails values(1123,10000,12000,11-02-2021,2021,'CS733','Computer Science');
select * from StudentAdmissionPaymentDetails;
```

	StudentRollNo	AmountPaid	AmountBalance	EnrolledDate	BatchNumber	SubjectCode	SubjectOpted
1	1112	10000	12000	-2012	2021	IT737	Information technology
2	1113	12000	10000	-2012	2021	CS733	Computer Science
3	1114	20000	2000	-2012	2021	EC735	Electronics and Comminication
4	1115	11000	11000	-2012	2021	IT737	Information technology
5	1116	1200	19800	-2012	2021	EC735	Electronics and Comminication
6	1117	19800	1200	-2012	2021	CS733	Computer Science
7	1118	2000	20000	-2012	2021	EC735	Electronics and Comminication
8	1119	20000	2000	-2012	2021	IT737	Information technology
9	1120	19500	500	-2012	2021	CS733	Computer Science
10	1121	9500	12000	-2012	2021	EC735	Electronics and Comminication
11	1122	12000	10000	-2012	2021	IT737	Information technology
12	1123	10000	12000	-2012	2021	CS733	Computer Science

```
Query executed successfully.    DESKTOP-L57MQH2 (15.0 RTM) | DESKTOP-L57MQH2\vijaya... | master | 00:00:00 | 12 rows
```

c)Insert into table StudentSubjectInformation

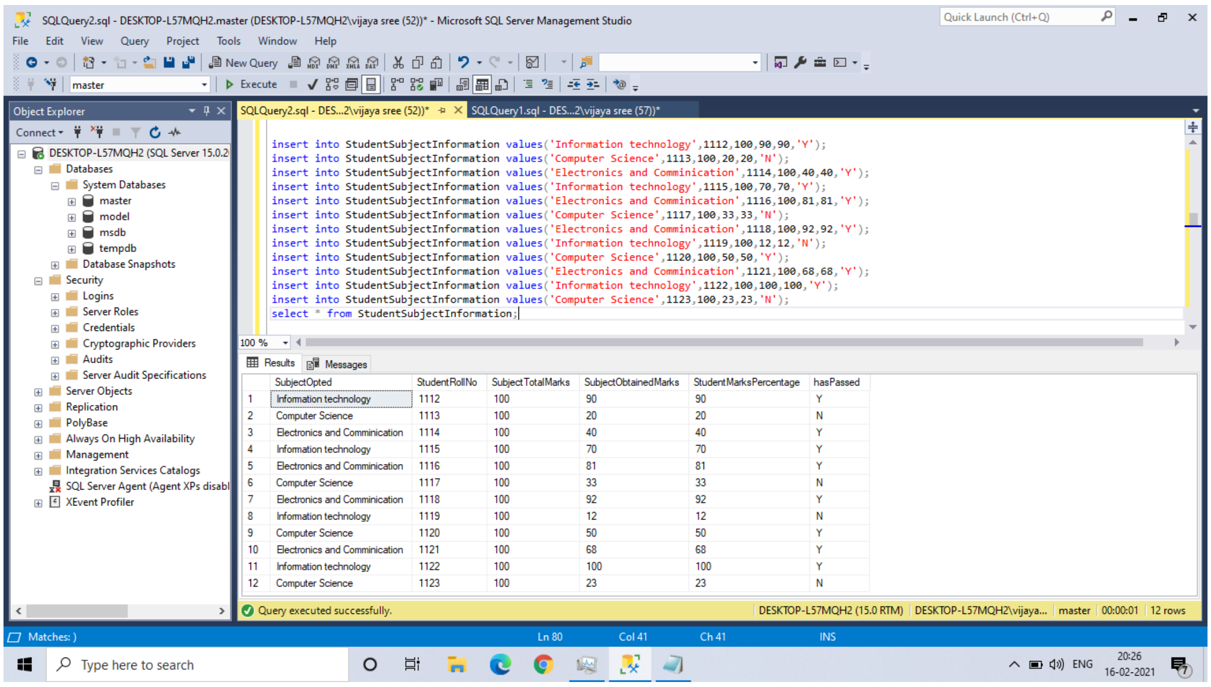
insert into StudentSubjectInformation values('Information technology',1112,100,90,90,'Y');

insert into StudentSubjectInformation values('Computer Science',1113,100,20,20,'N');

insert into StudentSubjectInformation values('Electronics and Comminication',1114,100,40,40,'Y');

```
insert into StudentSubjectInformation values('Information
technology',1115,100,70,70,'Y');

insert into StudentSubjectInformation values('Electronics and
Comminication',1116,100,81,81,'Y');

insert into StudentSubjectInformation values('Computer
Science',1117,100,33,33,'N');

insert into StudentSubjectInformation values('Electronics and
Comminication',1118,100,92,92,'Y');

insert into StudentSubjectInformation values('Information
technology',1119,100,12,12,'N');

insert into StudentSubjectInformation values('Computer
Science',1120,100,50,50,'Y');

insert into StudentSubjectInformation values('Electronics and
Comminication',1121,100,68,68,'Y');

insert into StudentSubjectInformation values('Information
technology',1122,100,100,100,'Y');

insert into StudentSubjectInformation values('Computer
Science',1123,100,23,23,'N');

select * from StudentSubjectInformation;
```

Output Screenshot:



```
insert into StudentSubjectInformation values('Information technology',1112,100,90,90,'Y');
insert into StudentSubjectInformation values('Computer Science',1113,100,20,20,'N');
insert into StudentSubjectInformation values('Electronics and Cominication',1114,100,40,40,'Y');
insert into StudentSubjectInformation values('Information technology',1115,100,70,70,'Y');
insert into StudentSubjectInformation values('Electronics and Cominication',1116,100,81,81,'Y');
insert into StudentSubjectInformation values('Computer Science',1117,100,33,33,'N');
insert into StudentSubjectInformation values('Electronics and Cominication',1118,100,92,92,'Y');
insert into StudentSubjectInformation values('Information technology',1119,100,12,12,'N');
insert into StudentSubjectInformation values('Computer Science',1120,100,50,50,'Y');
insert into StudentSubjectInformation values('Electronics and Cominication',1121,100,68,68,'Y');
insert into StudentSubjectInformation values('Information technology',1122,100,100,100,'Y');
insert into StudentSubjectInformation values('Computer Science',1123,100,23,23,'N');
select * from StudentSubjectInformation;
```

	SubjectOpted	StudentRollNo	SubjectTotalMarks	SubjectObtainedMarks	StudentMarksPercentage	hasPassed
1	Information technology	1112	100	90	90	Y
2	Computer Science	1113	100	20	20	N
3	Electronics and Cominication	1114	100	40	40	Y
4	Information technology	1115	100	70	70	Y
5	Electronics and Cominication	1116	100	81	81	Y
6	Computer Science	1117	100	33	33	N
7	Electronics and Cominication	1118	100	92	92	Y
8	Information technology	1119	100	12	12	N
9	Computer Science	1120	100	50	50	Y
10	Electronics and Cominication	1121	100	68	68	Y
11	Information technology	1122	100	100	100	Y
12	Computer Science	1123	100	23	23	N

```
Query executed successfully.
```

d)Insert into table SubjectScholarshipInformation:

insert into SubjectScholarshipInformation values(1112,'Tata Scholarship- Cornell University, USA','Tata Scholarship is offered by Tata Education support 20 scholars from India ',

25000,'merit','USA');

insert into SubjectScholarshipInformation values(1116,'Australian Embassy Fully Funded Scholarships','Australian Embassy scholarships ares for Undergraduate at universities in Australia',

1000,'merit','Australia');

insert into SubjectScholarshipInformation values(1118,'Melbourne - India PG Scholarship - Australia','The University of Melbourne offers International PG Scholarship to international students ',

100000,'merit','Australia');

insert into SubjectScholarshipInformation values(1120,'Commonwealth Scholarship and Fellowship-

UK','Offered by the Commonwealth Scholarships Commission to Indian students ',

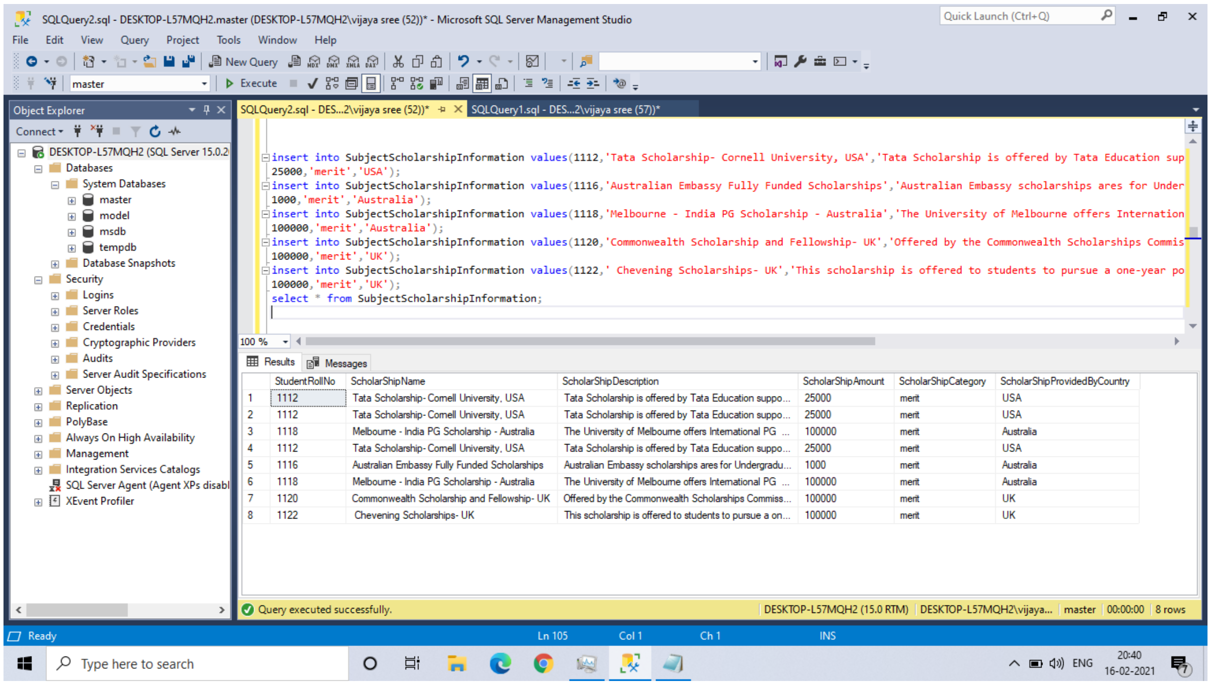
100000,'merit','UK');

insert into SubjectScholarshipInformation values(1122,' Chevening Scholarships- UK','This scholarship is offered to students to pursue a one-year postgraduate program in UK university ',

100000,'merit','UK');

select * from SubjectScholarshipInformation;

Output Screenshot:



```
insert into SubjectScholarshipInformation values(1112,'Tata Scholarship- Cornell University, USA','Tata Scholarship is offered by Tata Education sup
25000,'merit','USA');
insert into SubjectScholarshipInformation values(1116,'Australian Embassy Fully Funded Scholarships','Australian Embassy scholarships ares for Under
1000,'merit','Australia');
insert into SubjectScholarshipInformation values(1118,'Melbourne - India PG Scholarship - Australia','The University of Melbourne offers Internation
100000,'merit','Australia');
insert into SubjectScholarshipInformation values(1120,'Commonwealth Scholarship and Fellowship- UK','Offered by the Commonwealth Scholarships Commis
100000,'merit','UK');
insert into SubjectScholarshipInformation values(1122,' Chevening Scholarships- UK','This scholarship is offered to students to pursue a one-year po
100000,'merit','UK');
select * from SubjectScholarshipInformation;
```

	StudentRollNo	ScholarShipName	ScholarShipDescription	ScholarShipAmount	ScholarShipCategory	ScholarShipProvidedByCountry
1	1112	Tata Scholarship- Cornell University, USA	Tata Scholarship is offered by Tata Education suppo...	25000	merit	USA
2	1112	Tata Scholarship- Cornell University, USA	Tata Scholarship is offered by Tata Education suppo...	25000	merit	USA
3	1118	Melbourne - India PG Scholarship - Australia	The University of Melbourne offers International PG ...	100000	merit	Australia
4	1112	Tata Scholarship- Cornell University, USA	Tata Scholarship is offered by Tata Education suppo...	25000	merit	USA
5	1116	Australian Embassy Fully Funded Scholarships	Australian Embassy scholarships ares for Undergradu...	1000	merit	Australia
6	1118	Melbourne - India PG Scholarship - Australia	The University of Melbourne offers International PG ...	100000	merit	Australia
7	1120	Commonwealth Scholarship and Fellowship- UK	Offered by the Commonwealth Scholarships Commiss...	100000	merit	UK
8	1122	Chevening Scholarships- UK	This scholarship is offered to students to pursue a on...	100000	merit	UK

```
Query executed successfully.    DESKTOP-L57MQH2 (15.0 RTM) | DESKTOP-L57MQH2\vijaya... | master | 00:00:00 | 8 rows
```

5)Update Records

a)Update Table StudentBasicInformation

update StudentBasicInformation set StudentAddress='bangalore' where StudentRollNo=1116;

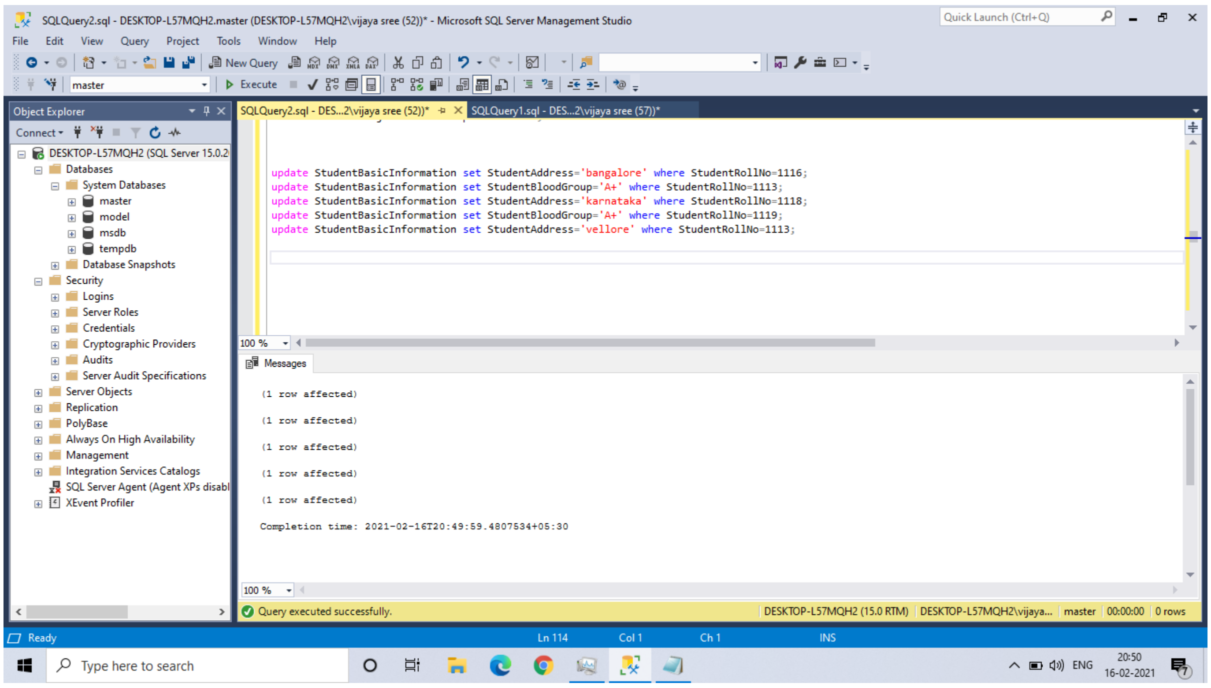
update StudentBasicInformation set StudentBloodGroup='A+' where StudentRollNo=1113;

update StudentBasicInformation set StudentAddress='karnataka' where StudentRollNo=1118;

update StudentBasicInformation set StudentBloodGroup='A+' where StudentRollNo=1119;

update StudentBasicInformation set StudentAddress='vellore' where StudentRollNo=1113;

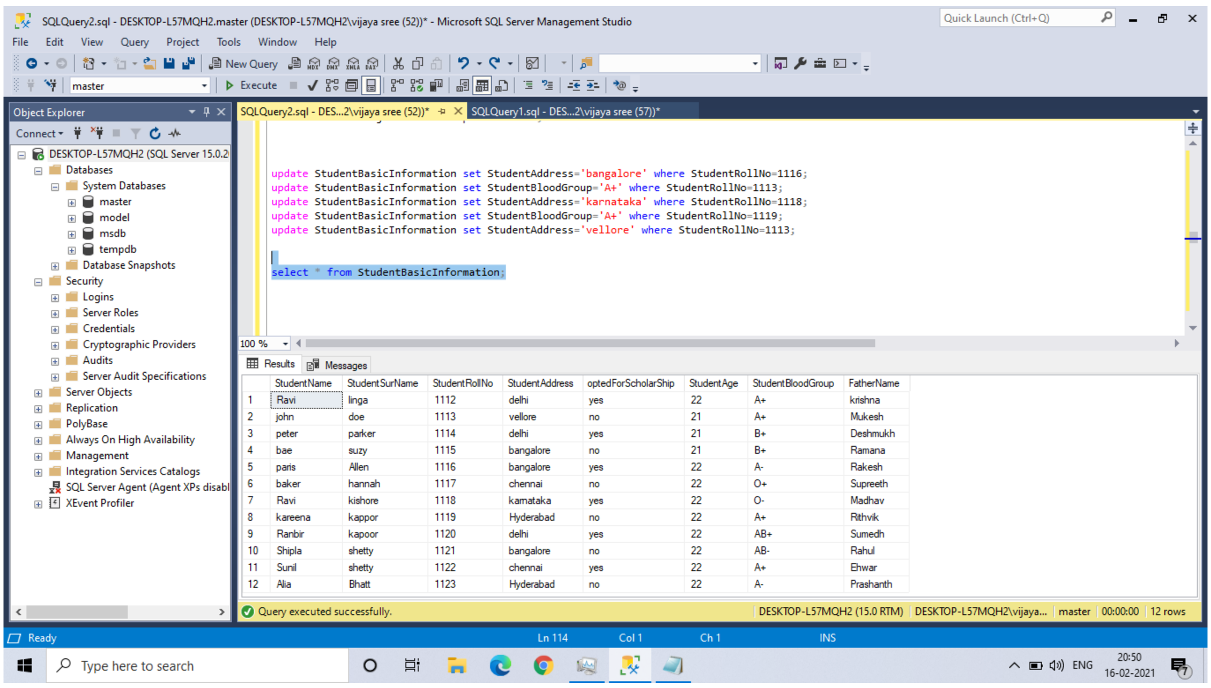
Output screenshot:



```
update StudentBasicInformation set StudentAddress='bangalore' where StudentRollNo=1116;
update StudentBasicInformation set StudentBloodGroup='A+' where StudentRollNo=1113;
update StudentBasicInformation set StudentAddress='karnataka' where StudentRollNo=1118;
update StudentBasicInformation set StudentBloodGroup='A+' where StudentRollNo=1119;
update StudentBasicInformation set StudentAddress='vellore' where StudentRollNo=1113;
```

```
(1 row affected)

(1 row affected)

(1 row affected)

(1 row affected)

(1 row affected)

Completion time: 2021-02-16T20:49:59.4807534+05:30
```

Query executed successfully.



```sql
update StudentBasicInformation set StudentAddress='bangalore' where StudentRollNo=1116;
update StudentBasicInformation set StudentBloodGroup='A+' where StudentRollNo=1113;
update StudentBasicInformation set StudentAddress='karnataka' where StudentRollNo=1118;
update StudentBasicInformation set StudentBloodGroup='A+' where StudentRollNo=1119;
update StudentBasicInformation set StudentAddress='vellore' where StudentRollNo=1113;

select * from StudentBasicInformation;
```

	StudentName	StudentSurName	StudentRollNo	StudentAddress	optedForScholarShip	StudentAge	StudentBloodGroup	FatherName
1	Ravi	linga	1112	delhi	yes	22	A+	krishna
2	john	doe	1113	vellore	no	21	A+	Mukesh
3	peter	parker	1114	delhi	yes	21	B+	Deshmukh
4	bae	suzy	1115	bangalore	no	21	B+	Ramana
5	paris	Allen	1116	bangalore	yes	22	A-	Rakesh
6	baker	hannah	1117	chennai	no	22	O+	Supreeth
7	Ravi	kishore	1118	kamataka	yes	22	O-	Madhav
8	kareena	kappor	1119	Hyderabad	no	22	A+	Rithvik
9	Ranbir	kapoor	1120	delhi	yes	22	AB+	Sumedh
10	Shipla	shetty	1121	bangalore	no	22	AB-	Rahul
11	Sunil	shetty	1122	chennai	yes	22	A+	Ehwar
12	Alia	Bhatt	1123	Hyderabad	no	22	A-	Prashanth

Query executed successfully. DESKTOP-L57MQH2 (15.0 RTM) | DESKTOP-L57MQH2\vijaya... | master | 00:00:00 | 12 rows

b)Update table StudentAdmissionPaymentDetails

update StudentAdmissionPaymentDetails set AmountBalance=5000 where StudentRollNo=1113;

update StudentAdmissionPaymentDetails set EnrolledDate=12-02-2021 where StudentRollNo=1114;

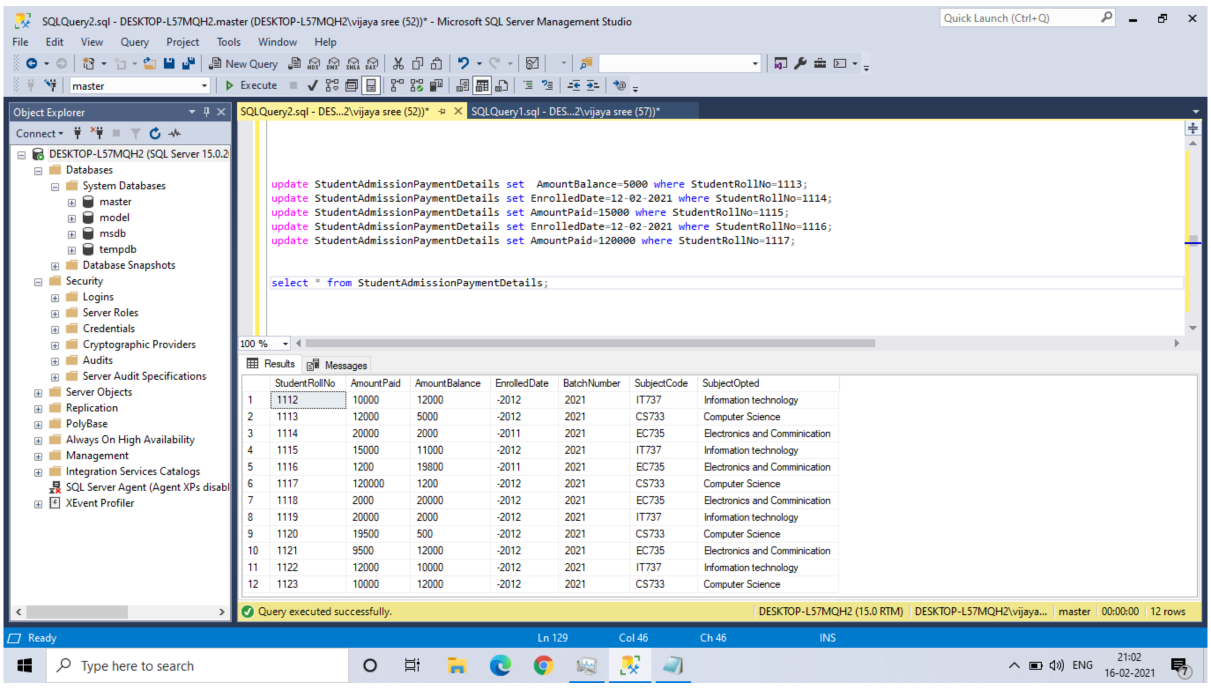
update StudentAdmissionPaymentDetails set AmountPaid=15000 where StudentRollNo=1115;

update StudentAdmissionPaymentDetails set EnrolledDate=12-02-2021 where StudentRollNo=1116;

update StudentAdmissionPaymentDetails set AmountPaid=120000 where StudentRollNo=1117;

select * from StudentAdmissionPaymentDetails;

Output Screenshot:



```
update StudentAdmissionPaymentDetails set  AmountBalance=5000 where StudentRollNo=1113;
update StudentAdmissionPaymentDetails set EnrolledDate=12-02-2021 where StudentRollNo=1114;
update StudentAdmissionPaymentDetails set AmountPaid=15000 where StudentRollNo=1115;
update StudentAdmissionPaymentDetails set EnrolledDate=12-02-2021 where StudentRollNo=1116;
update StudentAdmissionPaymentDetails set AmountPaid=120000 where StudentRollNo=1117;


select * from StudentAdmissionPaymentDetails;
```

	StudentRollNo	AmountPaid	AmountBalance	EnrolledDate	BatchNumber	SubjectCode	SubjectOpted
1	1112	10000	12000	-2012	2021	IT737	Information technology
2	1113	12000	5000	-2012	2021	CS733	Computer Science
3	1114	20000	2000	-2011	2021	EC735	Electronics and Commincation
4	1115	15000	11000	-2012	2021	IT737	Information technology
5	1116	1200	19800	-2011	2021	EC735	Electronics and Commincation
6	1117	120000	1200	-2012	2021	CS733	Computer Science
7	1118	2000	20000	-2012	2021	EC735	Electronics and Commincation
8	1119	20000	2000	-2012	2021	IT737	Information technology
9	1120	19500	500	-2012	2021	CS733	Computer Science
10	1121	9500	12000	-2012	2021	EC735	Electronics and Commincation
11	1122	12000	10000	-2012	2021	IT737	Information technology
12	1123	10000	12000	-2012	2021	CS733	Computer Science

Query executed successfully. DESKTOP-L57MQH2 (15.0 RTM) | DESKTOP-L57MQH2\vijaya... | master | 00:00:00 | 12 rows

c)Update table StudentSubjectInformation

update StudentSubjectInformation set SubjectTotalMarks=120 where StudentRollNo=1113;

update StudentSubjectInformation set SubjectTotalMarks=150 where StudentRollNo=1112;

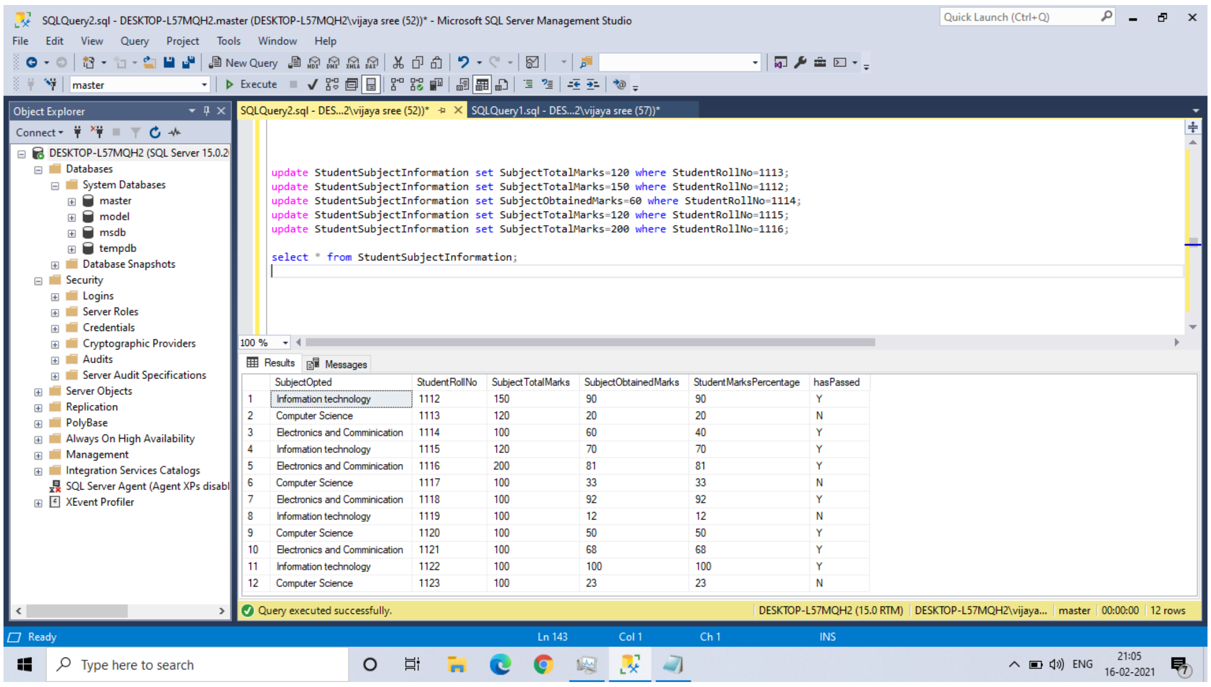
update StudentSubjectInformation set SubjectObtainedMarks=60 where StudentRollNo=1114;

update StudentSubjectInformation set SubjectTotalMarks=120 where StudentRollNo=1115;

update StudentSubjectInformation set SubjectTotalMarks=200 where StudentRollNo=1116;

select * from StudentSubjectInformation;

Output Screenshot:



```
update StudentSubjectInformation set SubjectTotalMarks=120 where StudentRollNo=1113;
update StudentSubjectInformation set SubjectTotalMarks=150 where StudentRollNo=1112;
update StudentSubjectInformation set SubjectObtainedMarks=60 where StudentRollNo=1114;
update StudentSubjectInformation set SubjectTotalMarks=120 where StudentRollNo=1115;
update StudentSubjectInformation set SubjectTotalMarks=200 where StudentRollNo=1116;

select * from StudentSubjectInformation;
```

	SubjectOpted	StudentRollNo	SubjectTotalMarks	SubjectObtainedMarks	StudentMarksPercentage	hasPassed
1	Information technology	1112	150	90	90	Y
2	Computer Science	1113	120	20	20	N
3	Electronics and Comminication	1114	100	60	40	Y
4	Information technology	1115	120	70	70	Y
5	Electronics and Comminication	1116	200	81	81	Y
6	Computer Science	1117	100	33	33	N
7	Electronics and Comminication	1118	100	92	92	Y
8	Information technology	1119	100	12	12	N
9	Computer Science	1120	100	50	50	Y
10	Electronics and Comminication	1121	100	68	68	Y
11	Information technology	1122	100	100	100	Y
12	Computer Science	1123	100	23	23	N

```
Query executed successfully.    DESKTOP-L57MQH2 (15.0 RTM) | DESKTOP-L57MQH2\vijaya... | master | 00:00:00 | 12 rows
```

d)Update Table SubjectScholarshipInformation

update SubjectScholarshipInformation set ScholarShipAmount=75000 where StudentRollNo=1112;

update SubjectScholarshipInformation set ScholarShipCategory='nonmerit' where StudentRollNo=1116;

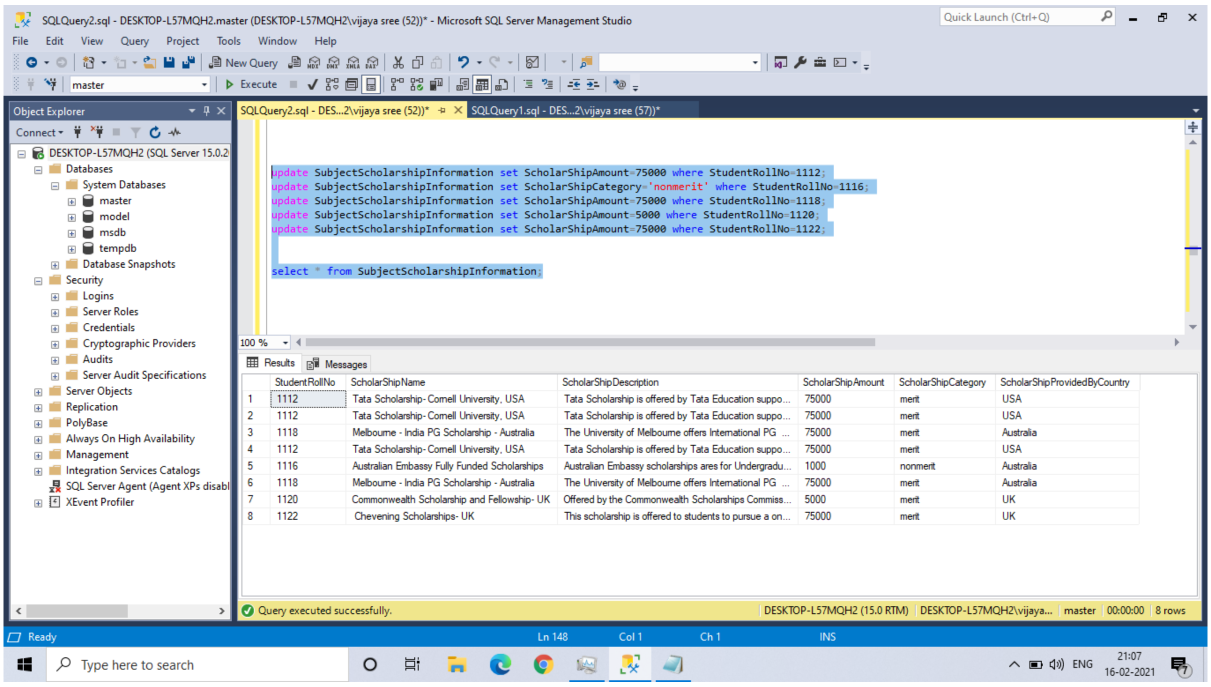
update SubjectScholarshipInformation set ScholarShipAmount=75000 where StudentRollNo=1118;

update SubjectScholarshipInformation set ScholarShipAmount=5000 where StudentRollNo=1120;

update SubjectScholarshipInformation set ScholarShipAmount=75000 where StudentRollNo=1122;

select * from SubjectScholarshipInformation;

Output Screenshot:



```
update SubjectScholarshipInformation set ScholarShipAmount=75000 where StudentRollNo=1112;
update SubjectScholarshipInformation set ScholarShipCategory='nonmerit' where StudentRollNo=1116;
update SubjectScholarshipInformation set ScholarShipAmount=75000 where StudentRollNo=1118;
update SubjectScholarshipInformation set ScholarShipAmount=5000 where StudentRollNo=1120;
update SubjectScholarshipInformation set ScholarShipAmount=75000 where StudentRollNo=1122;


select * from SubjectScholarshipInformation;
```

	StudentRollNo	ScholarShipName	ScholarShipDescription	ScholarShipAmount	ScholarShipCategory	ScholarShipProvidedByCountry
1	1112	Tata Scholarship- Cornell University, USA	Tata Scholarship is offered by Tata Education suppo...	75000	merit	USA
2	1112	Tata Scholarship- Cornell University, USA	Tata Scholarship is offered by Tata Education suppo...	75000	merit	USA
3	1118	Melbourne - India PG Scholarship - Australia	The University of Melbourne offers International PG ...	75000	merit	Australia
4	1112	Tata Scholarship- Cornell University, USA	Tata Scholarship is offered by Tata Education suppo...	75000	merit	USA
5	1116	Australian Embassy Fully Funded Scholarships	Australian Embassy scholarships ares for Undergradu...	1000	nonmerit	Australia
6	1118	Melbourne - India PG Scholarship - Australia	The University of Melbourne offers International PG ...	75000	merit	Australia
7	1120	Commonwealth Scholarship and Fellowship- UK	Offered by the Commonwealth Scholarships Commiss...	5000	merit	UK
8	1122	Chevening Scholarships- UK	This scholarship is offered to students to pursue a on...	75000	merit	UK

```
Query executed successfully.    DESKTOP-L57MQH2 (15.0 RTM) | DESKTOP-L57MQH2\vijaya... | master | 00:00:00 | 8 rows
```

7)Select all the students with scholarship more than 5000/Rs

Query:

select a.* from StudentBasicInformation a left join SubjectScholarshipInformation b

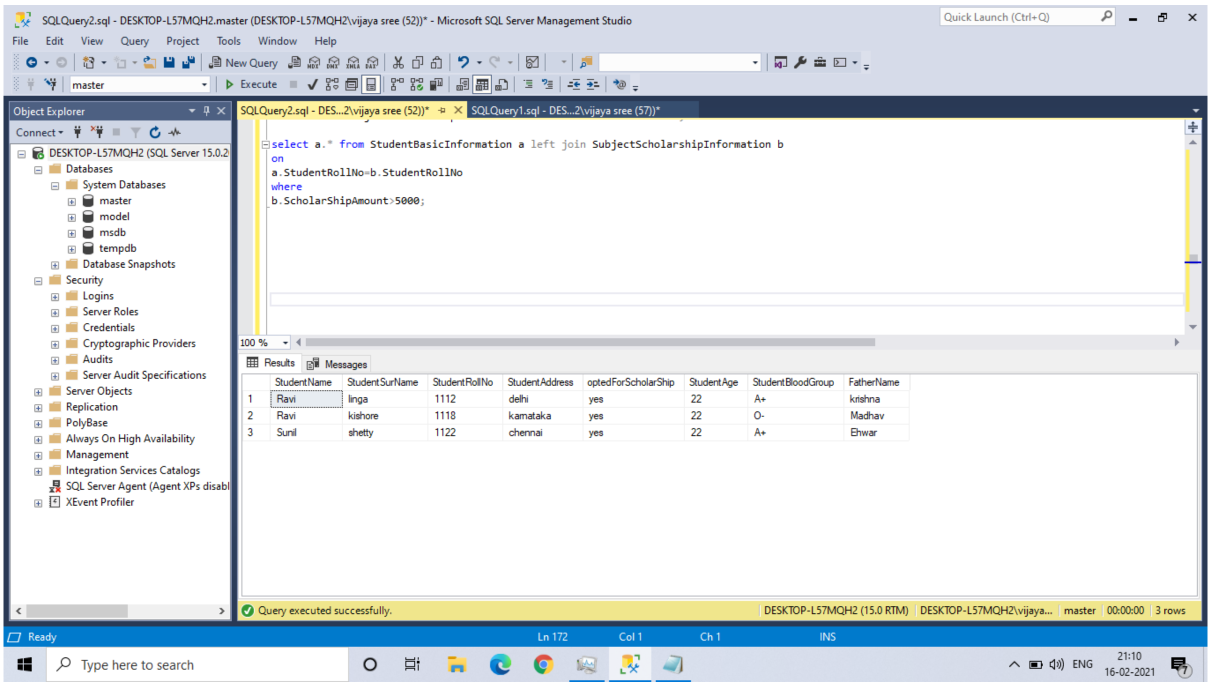
on

a.StudentRollNo=b.StudentRollNo

where

b.ScholarShipAmount>5000;

Output Screenshot:



```sql
select a.* from StudentBasicInformation a left join SubjectScholarshipInformation b
on
a.StudentRollNo=b.StudentRollNo
where
b.ScholarShipAmount>5000;
```

	StudentName	StudentSurName	StudentRollNo	StudentAddress	optedForScholarShip	StudentAge	StudentBloodGroup	FatherName
1	Ravi	linga	1112	delhi	yes	22	A+	krishna
2	Ravi	kishore	1118	karnataka	yes	22	O-	Madhav
3	Sunil	shetty	1122	chennai	yes	22	A+	Ehwar

Query executed successfully. DESKTOP-L57MQH2 (15.0 RTM) | DESKTOP-L57MQH2\vijaya... | master | 00:00:00 | 3 rows

8)Students who has opted for scholarship but did not get

Query:

select * from StudentBasicInformation a

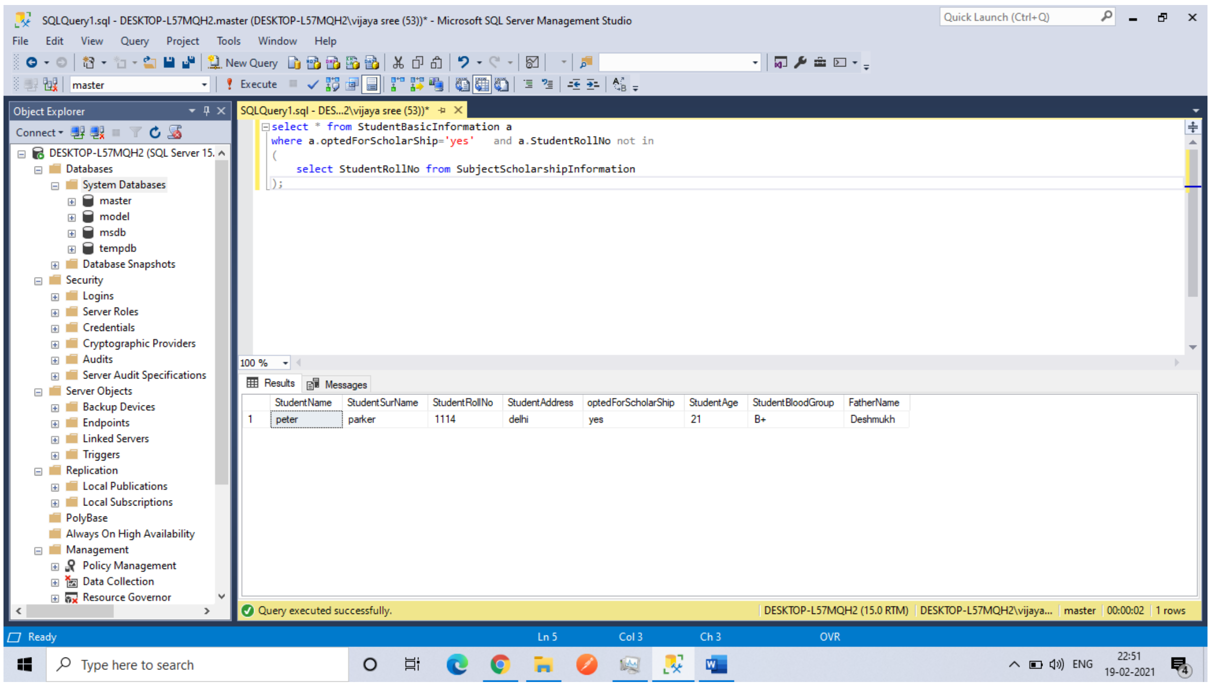
where a.optedForScholarShip='yes'   and a.StudentRollNo not in

(

    select StudentRollNo from SubjectScholarshipInformation

);

Output Screenshot:



```
select * from StudentBasicInformation a
where a.optedForScholarShip='yes'   and a.StudentRollNo not in
(
    select StudentRollNo from SubjectScholarshipInformation
);
```

	StudentName	StudentSurName	StudentRollNo	StudentAddress	optedForScholarShip	StudentAge	StudentBloodGroup	FatherName
1	peter	parker	1114	delhi	yes	21	B+	Deshmukh

Query executed successfully.

9)Using stored procedure fill in StudentMarksPercentage

Query:

create procedure updatePercentage @rollno int

as

update StudentSubjectInformation set StudentMarksPercentage=(SubjectObtainedMarks*100)/SubjectTotalMarks

where StudentRollNo=@rollno

go

exec updatePercentage @rollno=1113

exec updatePercentage @rollno=1112

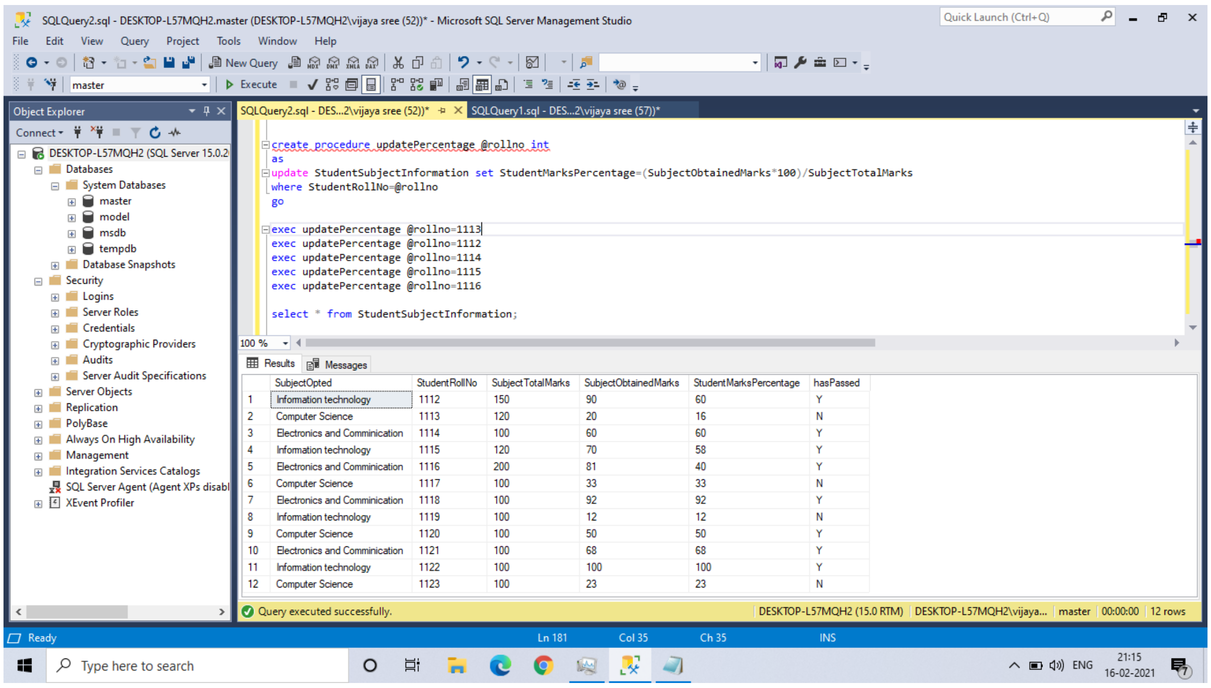
exec updatePercentage @rollno=1114

exec updatePercentage @rollno=1115

exec updatePercentage @rollno=1116

select * from StudentSubjectInformation;

Output Screenshot:



```
create procedure updatePercentage @rollno int
as
update StudentSubjectInformation set StudentMarksPercentage=(SubjectObtainedMarks*100)/SubjectTotalMarks
where StudentRollNo=@rollno
go

exec updatePercentage @rollno=1113
exec updatePercentage @rollno=1112
exec updatePercentage @rollno=1114
exec updatePercentage @rollno=1115
exec updatePercentage @rollno=1116

select * from StudentSubjectInformation;
```

	SubjectOpted	StudentRollNo	SubjectTotalMarks	SubjectObtainedMarks	StudentMarksPercentage	hasPassed
1	Information technology	1112	150	90	60	Y
2	Computer Science	1113	120	20	16	N
3	Electronics and Commінication	1114	100	60	60	Y
4	Information technology	1115	120	70	58	Y
5	Electronics and Commination	1116	200	81	40	Y
6	Computer Science	1117	100	33	33	N
7	Electronics and Commination	1118	100	92	92	Y
8	Information technology	1119	100	12	12	N
9	Computer Science	1120	100	50	50	Y
10	Electronics and Commination	1121	100	68	68	Y
11	Information technology	1122	100	100	100	Y
12	Computer Science	1123	100	23	23	N

Query executed successfully.

10) Decide the category of the scholarship depending upon the marks/percentage obtained by the student and likewise update the ScholarshipCategory column, create a stored procedure in order to handle this operation

Query:

create procedure ChangeScholarshipCategory @rollno int

as

update SubjectScholarshipInformation

set ScholarShipCategory =

case

when @rollno in (select StudentRollNo from StudentSubjectInformation where StudentSubjectInformation.StudentMarksPercentage between

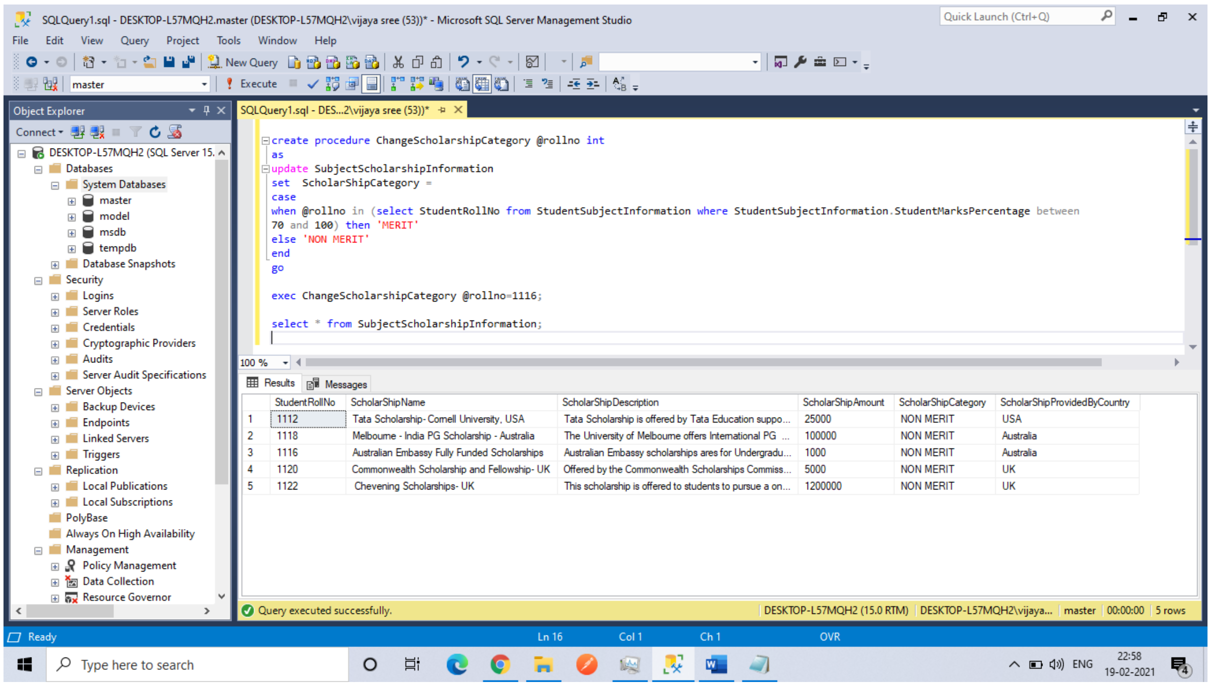
70 and 100) then 'MERIT'

else 'NON MERIT'

end

go

Output Screenshot:



```
create procedure ChangeScholarshipCategory @rollno int
as
update SubjectScholarshipInformation
set  ScholarShipCategory =
case
when @rollno in (select StudentRollNo from StudentSubjectInformation where StudentSubjectInformation.StudentMarksPercentage between
70 and 100) then 'MERIT'
else 'NON MERIT'
end
go

exec ChangeScholarshipCategory @rollno=1116;

select * from SubjectScholarshipInformation;
```

	StudentRollNo	ScholarShipName	ScholarShipDescription	ScholarShipAmount	ScholarShipCategory	ScholarShipProvidedByCountry
1	1112	Tata Scholarship- Cornell University, USA	Tata Scholarship is offered by Tata Education suppo...	25000	NON MERIT	USA
2	1118	Melbourne - India PG Scholarship - Australia	The University of Melbourne offers International PG ...	100000	NON MERIT	Australia
3	1116	Australian Embassy Fully Funded Scholarships	Australian Embassy scholarships ares for Undergradu...	1000	NON MERIT	Australia
4	1120	Commonwealth Scholarship and Fellowship- UK	Offered by the Commonwealth Scholarships Commiss...	5000	NON MERIT	UK
5	1122	Chevening Scholarships- UK	This scholarship is offered to students to pursue a on...	1200000	NON MERIT	UK

Query executed successfully.

11)Create a view for getting student details along with balance

Query:

Using joins

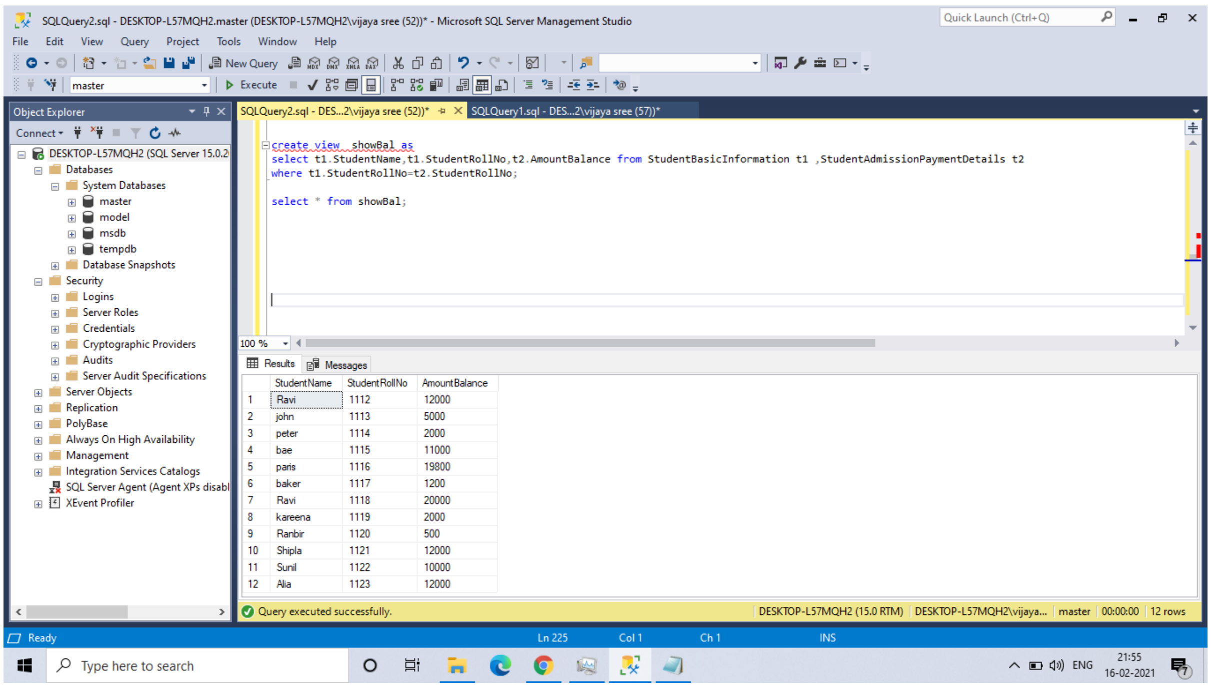
create view showBal as

select t1.StudentName,t1.StudentRollNo,t2.AmountBalance from StudentBasicInformation t1 ,StudentAdmissionPaymentDetails t2

where t1.StudentRollNo=t2.StudentRollNo;

select * from showBal;

Output Screenshot:



```
create view  showBal as
select t1.StudentName,t1.StudentRollNo,t2.AmountBalance from StudentBasicInformation t1 ,StudentAdmissionPaymentDetails t2
where t1.StudentRollNo=t2.StudentRollNo;

select * from showBal;
```

	StudentName	StudentRollNo	AmountBalance
1	Ravi	1112	12000
2	john	1113	5000
3	peter	1114	2000
4	bae	1115	11000
5	paris	1116	19800
6	baker	1117	1200
7	Ravi	1118	20000
8	kareena	1119	2000
9	Ranbir	1120	500
10	Shipla	1121	12000
11	Sunil	1122	10000
12	Alia	1123	12000

```
Query executed successfully.    DESKTOP-L57MQH2 (15.0 RTM) | DESKTOP-L57MQH2\vijaya... | master | 00:00:00 | 12 rows
```

12)Get the student details who haven’t got any scholarship

Query:

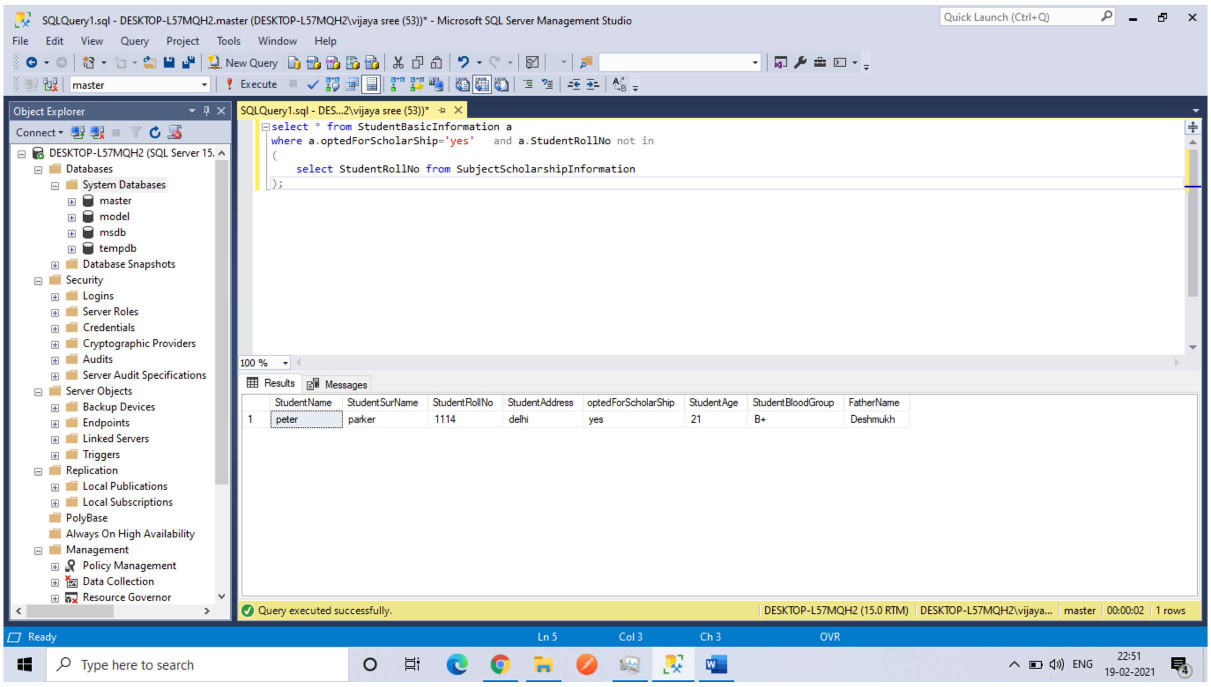
select * from StudentBasicInformation a

where a.optedForScholarShip='yes'   and a.StudentRollNo not in

(

   select StudentRollNo from SubjectScholarshipInformation

);



```
select * from StudentBasicInformation a
where a.optedForScholarShip='yes'   and a.StudentRollNo not in
(
    select StudentRollNo from SubjectScholarshipInformation
);
```

	StudentName	StudentSurName	StudentRollNo	StudentAddress	optedForScholarShip	StudentAge	StudentBloodGroup	FatherName
1	peter	parker	1114	delhi	yes	21	B+	Deshmukh

```
Query executed successfully.    DESKTOP-L57MQH2 (15.0 RTM)  DESKTOP-L57MQH2\vijaya...  master  00:00:02  1 rows
```

13)Get the balance amount from StudentAdmissionpaymentdetails

Query:

create procedure findBal @rollno int

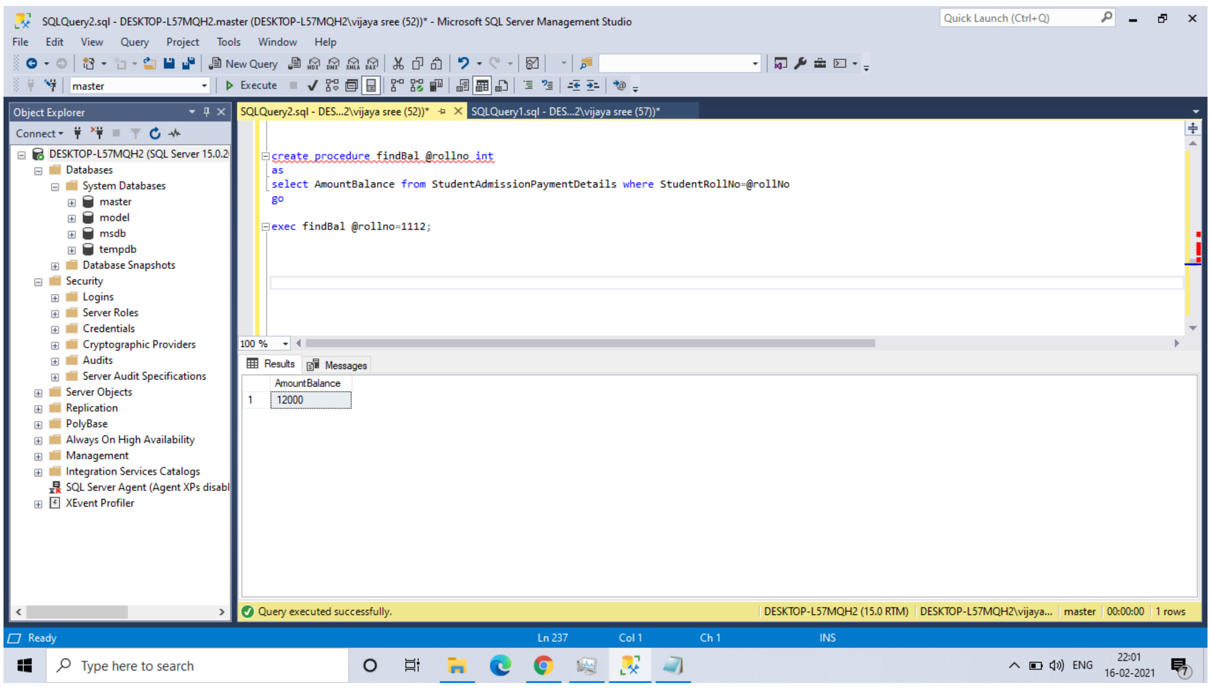
as

select AmountBalance from StudentAdmissionPaymentDetails where StudentRollNo=@rollNo

go

exec findBal @rollno=1112;

Output screenshot:



```
create procedure findBal @rollno int
as
select AmountBalance from StudentAdmissionPaymentDetails where StudentRollNo=@rollNo
go

exec findBal @rollno=1112;
```

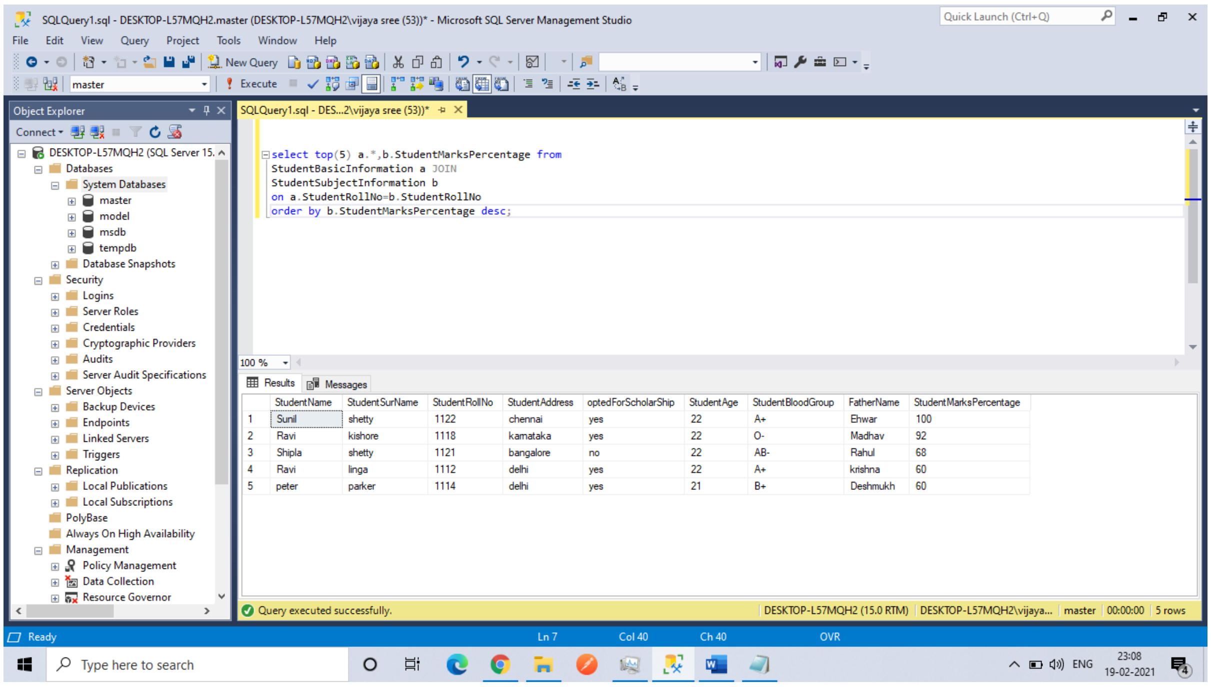
	AmountBalance
1	12000

Query executed successfully.

14) Retrieve the top five student details as per the StudentMarksPercentage values (use subqueries)

Query:

Select top(5),a.*,b.StudentMarksPercentage from StudentBasicInformation a JOIN StudentSubjectInfromation b on a.StudentRollNo=b.StudentRollNo order by b.StudentMarksPercentage desc;



```
select top(5) a.*,b.StudentMarksPercentage from
StudentBasicInformation a JOIN
StudentSubjectInformation b
on a.StudentRollNo=b.StudentRollNo
order by b.StudentMarksPercentage desc;
```

	StudentName	StudentSurName	StudentRollNo	StudentAddress	optedForScholarShip	StudentAge	StudentBloodGroup	FatherName	StudentMarksPercentage
1	Sunil	shetty	1122	chennai	yes	22	A+	Ehwar	100
2	Ravi	kishore	1118	karnataka	yes	22	O-	Madhav	92
3	Shipla	shetty	1121	bangalore	no	22	AB-	Rahul	68
4	Ravi	linga	1112	delhi	yes	22	A+	krishna	60
5	peter	parker	1114	delhi	yes	21	B+	Deshmukh	60

Query executed successfully.

15) Try to use all the three types of join learned today in a relevant way, and explain the same why you thought of using that particular join for your selected scenarios (try to cover relevant and real time scenarios for all the three studied joins)

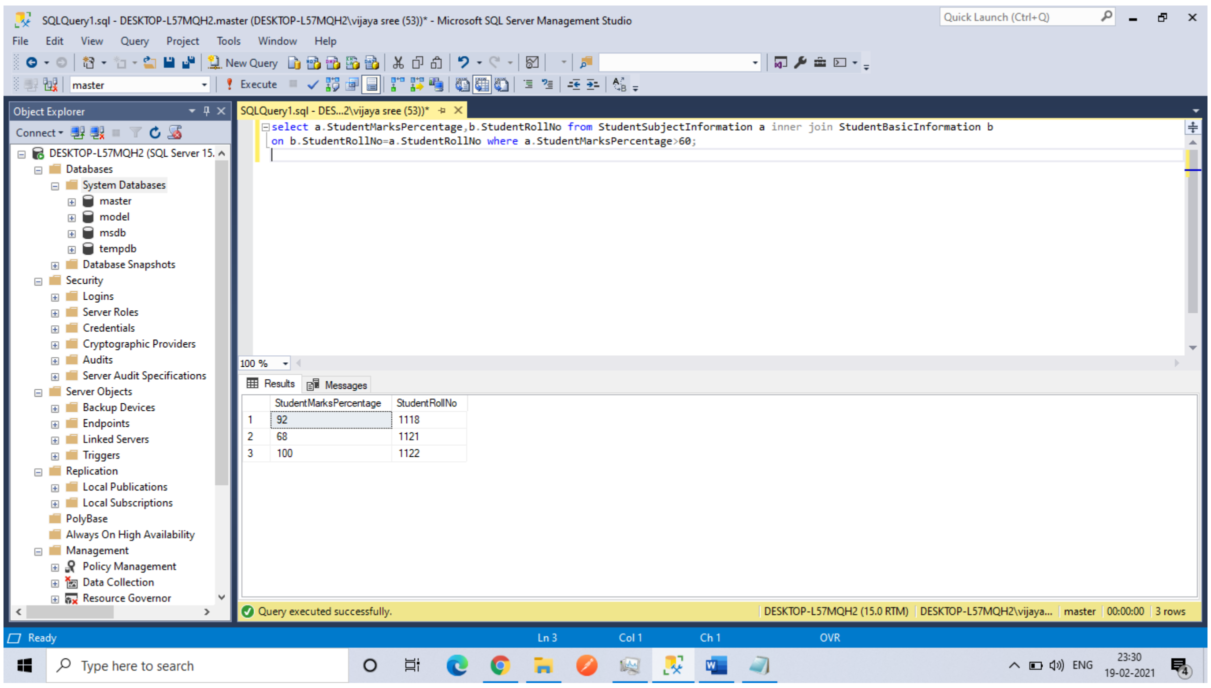
1)Using inner join

→We want to find the studenst who got more than 60% then we need join(combine) two tables called StudentBasicInfromation and StudentSubjectInformation to get the details of Student

Query:

select a.StudentMarksPercentage,b.StudentRollNo from StudentSubjectInformation a inner join StudentBasicInformation b

on b.StudentRollNo=a.StudentRollNo where a.StudentMarksPercentage>60;



```
select a.StudentMarksPercentage,b.StudentRollNo from StudentSubjectInformation a inner join StudentBasicInformation b
on b.StudentRollNo=a.StudentRollNo where a.StudentMarksPercentage>60;
```

	StudentMarksPercentage	StudentRollNo
1	92	1118
2	68	1121
3	100	1122

```
Query executed successfully.    DESKTOP-L57MQH2 (15.0 RTM)    DESKTOP-L57MQH2\vijaya...    master    00:00:00    3 rows
```

2)Using Right Join

→We want to get highest marks obtained by person who got scholar so we need to right join StudentBasicInformation and StudentSubjectInformation

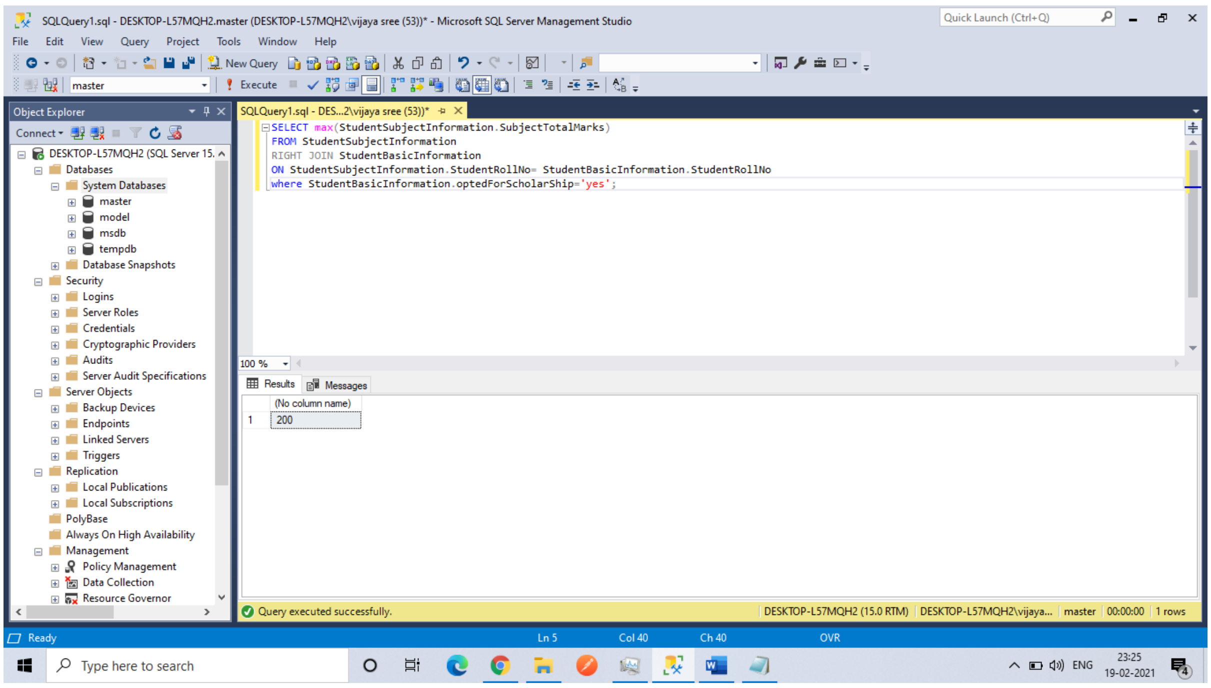
Query:

Select max(StudentSubjectInformation.subjectTotalMarks)

From StudentSubjectInfromation

RIGHT JOIN StudentBasicInformation

On StudentSubjectInformation.StudentRollNo=StudentBasicInformation.StudentRollNo where StudentBasicInformation.optedForScholarship=’yes’;



```
SELECT max(StudentSubjectInformation.SubjectTotalMarks)
FROM StudentSubjectInformation
RIGHT JOIN StudentBasicInformation
ON StudentSubjectInformation.StudentRollNo= StudentBasicInformation.StudentRollNo
where StudentBasicInformation.optedForScholarShip='yes';
```

```
   (No column name)
1  200
```

Query executed successfully.

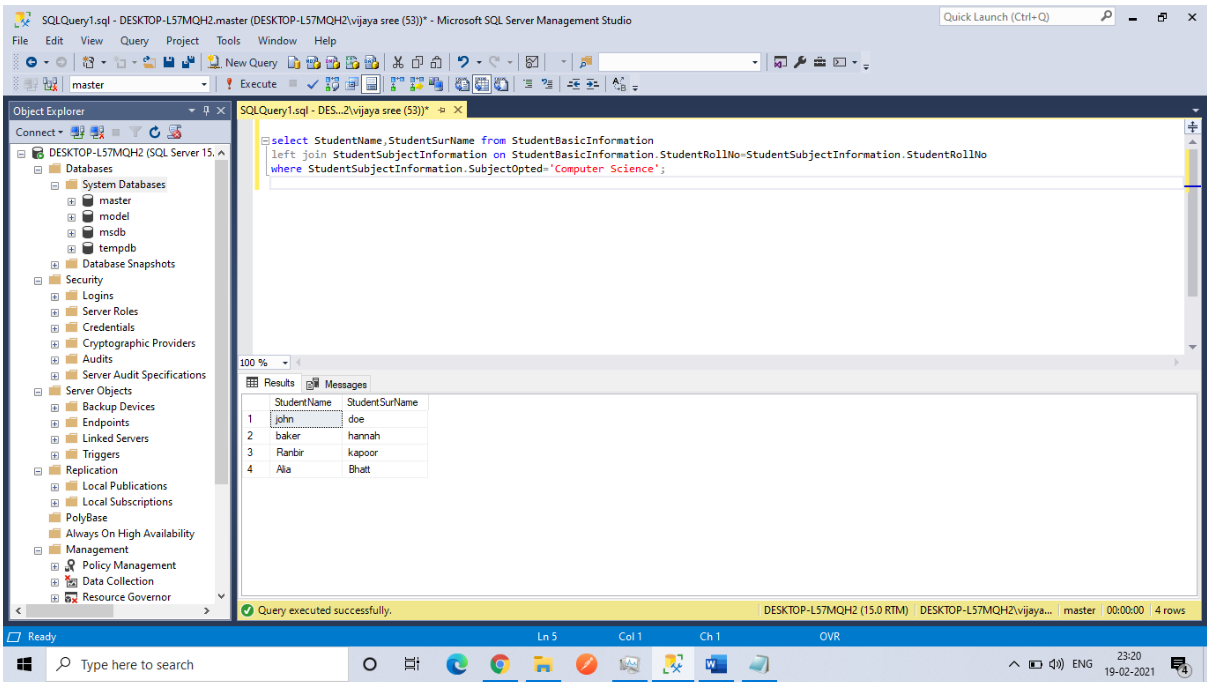
3)Left Join

→To get the details of Student who opted for subject computer science we need to left join StudentBasicInformation and StudentSubjectInformation.

Select StudentName,StudentSurName from StudentBasicInformation

LEFT JOIN StudentSubjectInformation on StudentBasicInformation.StudentRollNo = StudentSubjectInformation.StudentRollNo where StudentSubjectInfromation.subjectedOpted='Computer Science';

Output Screenshot:



```
select StudentName,StudentSurName from StudentBasicInformation
left join StudentSubjectInformation on StudentBasicInformation.StudentRollNo=StudentSubjectInformation.StudentRollNo
where StudentSubjectInformation.SubjectOpted='Computer Science';
```

```
   StudentName  StudentSurName
1  john         doe
2  baker        hannah
3  Ranbir       kapoor
4  Alia         Bhatt
```

Query executed successfully.

16) Mention the differences between the delete, drop and truncate commands

Delete	Truncate	Drop
it is a Data Manipulation Language Command (DML)	It is also a Data Definition Language Command (DDL)	It is a Data Definition Language Command (DDL)
It is use to delete the one or more tuples of a table and Here we can use the “ROLLBACK” command to restore the tuple.	It is use to delete all the rows of a relation (table) in one go	It is use to drop the whole table. With the help of “DROP” command we can drop (delete) the whole structure in one go.
To delete all rows we use delete from table_name.To delete a	With the help of “TRUNCATE” command we can’t delete the	We cant restore using Rollback

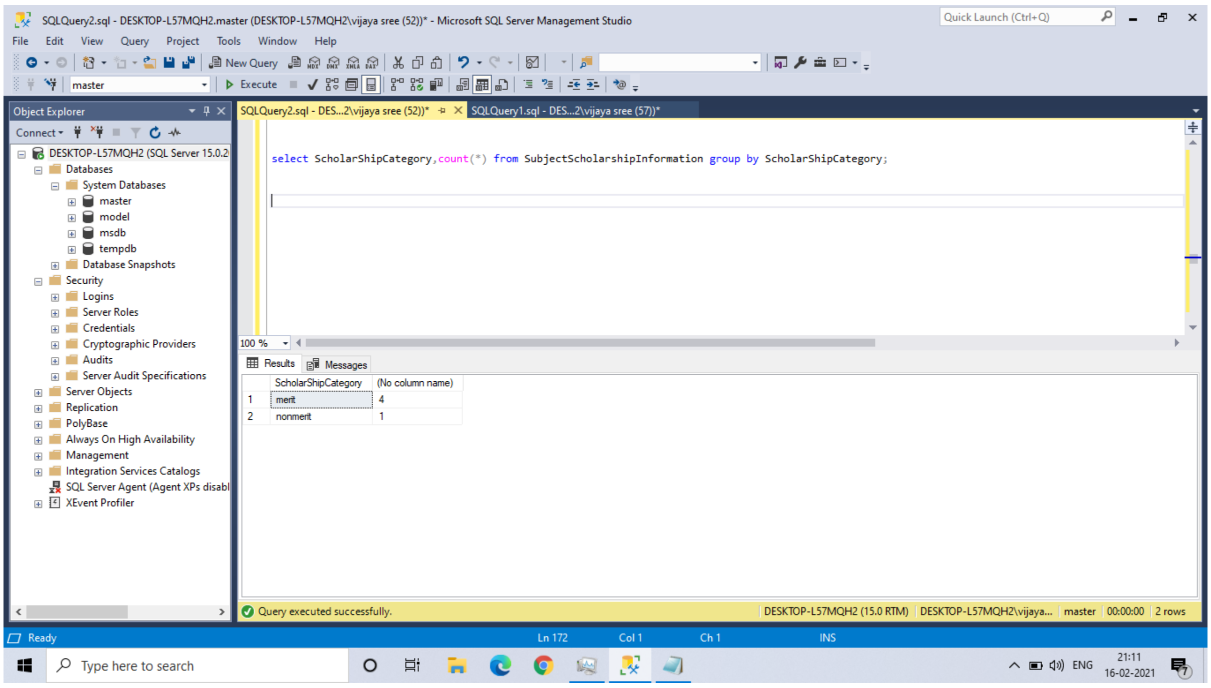
particular row we use where clause	single row as here WHERE clause is not used	
It is comparatively slower than TRUNCATE cmd.	It is comparatively faster than delete command	By using this command the existence of the whole table is finished or say lost.
Ex:delete from StudentBasicInfromation where StudentRollNo=1112	Trunctate table StudentBasicInformtion	Ex: drop table StudentBasicInformation

17)Count of Scholarship category

Query

select ScholarShipCategory,count(*) from SubjectScholarshipInformation group by ScholarShipCategory;

Output Screenshot:



```
select ScholarShipCategory,count(*) from SubjectScholarshipInformation group by ScholarShipCategory;
```

```
   ScholarShipCategory  (No column name)
1  merit                4
2  nonmerit             1
```

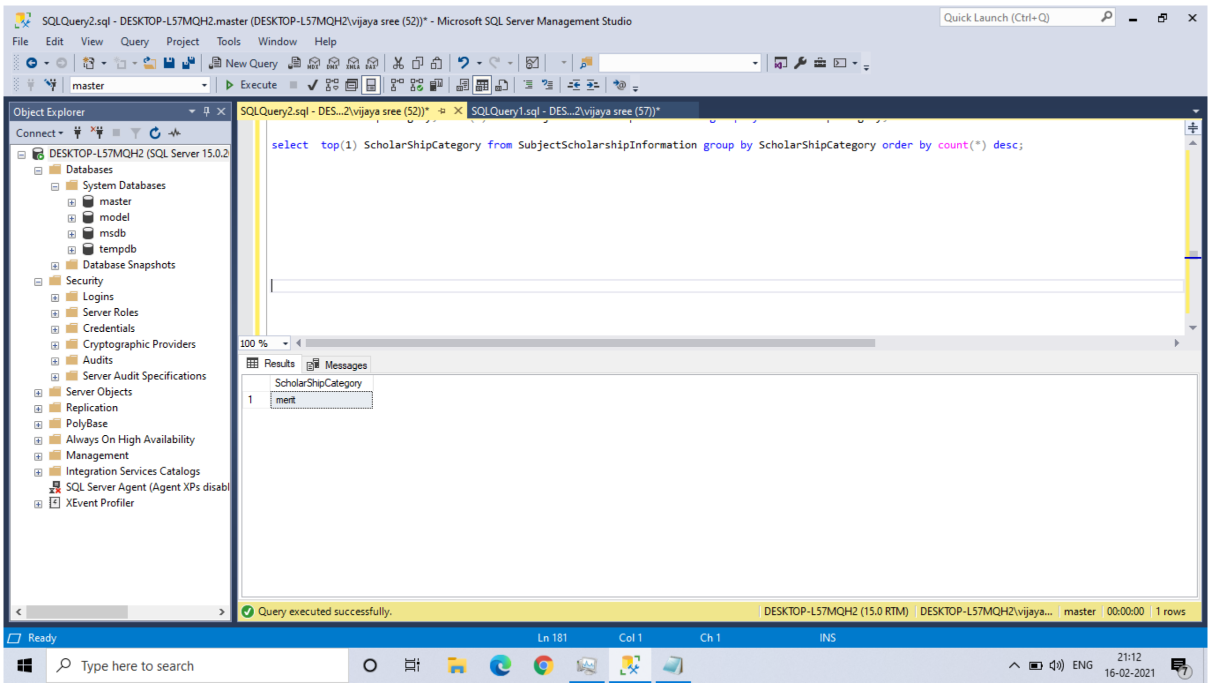
Query executed successfully.

18)Maximum used scholarship category

Query:

select top(1) ScholarShipCategory from SubjectScholarshipInformation group by ScholarShipCategory order by count(*) desc;

Output Screenshot:



```
select top(1) ScholarShipCategory from SubjectScholarshipInformation group by ScholarShipCategory order by count(*) desc;
```

	ScholarShipCategory
1	merit

```
Query executed successfully.    DESKTOP-L57MQH2 (15.0 RTM) | DESKTOP-L57MQH2\vijaya... | master | 00:00:00 | 1 rows
```

19) Retrieve the percentage of the students along with students detailed information who has scored the highest percentage along with availing the maximum scholarship amount

Query:

SELECT b.*,(a.StudentMarksPercentage)

FROM StudentBasicInformation a

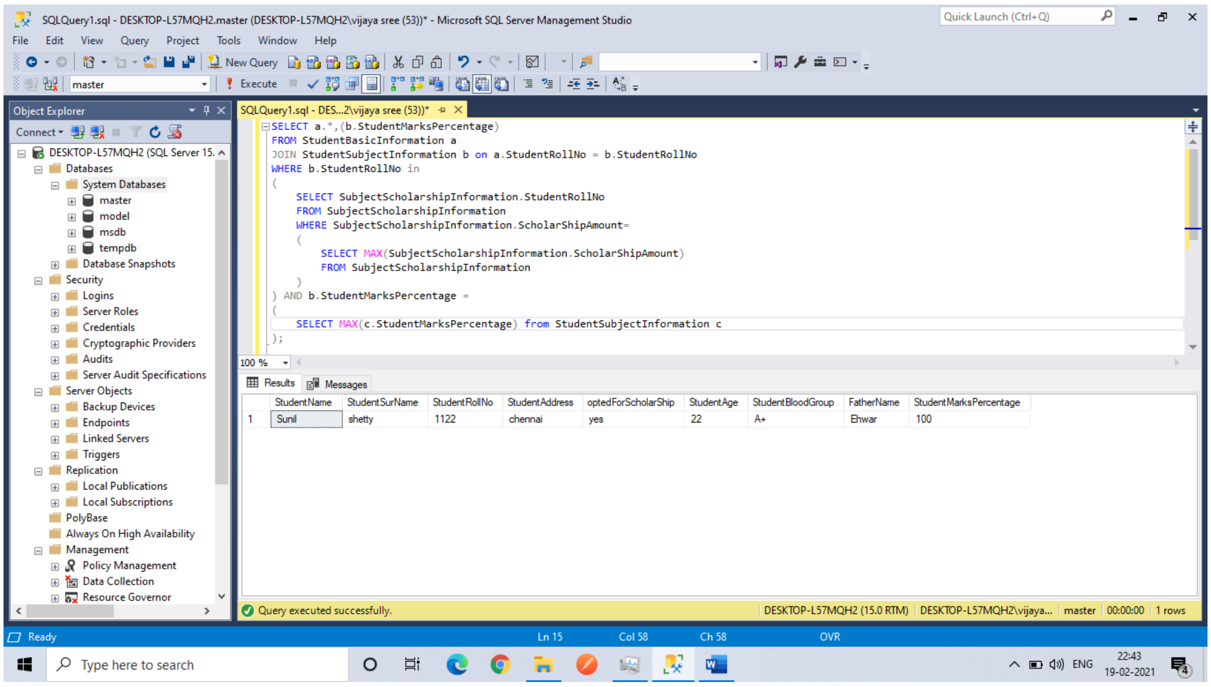
JOIN StudentSubjectInformation s on a.StudentRollNo = b.StudentRollNo

WHERE b.StudentRollNo in

(

```
    SELECT SubjectScholarshipInformation.StudentRollNo
    FROM SubjectScholarshipInformation
    WHERE SubjectScholarshipInformation.amount =
    (
        SELECT MAX(SubjectScholarshipInformation.amount)
        FROM SubjectScholarshipInformation
    )
) AND b.StudentMarksPercentage =
(
    SELECT MAX(c.StudentMarksPercentage) from StudentSubjectInformation c
)
```

Output Screenshot:



```
SELECT a.*,(b.StudentMarksPercentage)
FROM StudentBasicInformation a
JOIN StudentSubjectInformation b on a.StudentRollNo = b.StudentRollNo
WHERE b.StudentRollNo in
(
    SELECT SubjectScholarshipInformation.StudentRollNo
    FROM SubjectScholarshipInformation
    WHERE SubjectScholarshipInformation.ScholarShipAmount=
    (
        SELECT MAX(SubjectScholarshipInformation.ScholarShipAmount)
        FROM SubjectScholarshipInformation
    )
) AND b.StudentMarksPercentage =
(
    SELECT MAX(c.StudentMarksPercentage) from StudentSubjectInformation c
);
```

	StudentName	StudentSurName	StudentRollNo	StudentAddress	optedForScholarShip	StudentAge	StudentBloodGroup	FatherName	StudentMarksPercentage
1	Sunil	shetty	1122	chennai	yes	22	A+	Ehwar	100

Query executed successfully.

20. Difference between the Triggers, Stored Procedures, Views and Functions?

Trigger: A trigger is a stored procedure in database which automatically invokes whenever a special event in the database occurs. For example, a trigger can be invoked when a row is inserted into a specified table or when certain table columns are being updated.

Syntax:

```
create trigger [trigger_name]
[before | after]
{insert | update | delete}
on [table_name]
[for each row]
[trigger_body]
```

Explanation of syntax:

create trigger [trigger_name]: Creates or replaces an existing trigger with the trigger_name.

[before | after]: This specifies when the trigger will be executed.

{insert | update | delete}: This specifies the DML operation.

on [table_name]: This specifies the name of the table associated with the trigger.

[for each row]: This specifies a row-level trigger, i.e., the trigger will be executed for each row being affected.

[trigger_body]: This provides the operation to be performed as trigger is fired

BEFORE and AFTER of Trigger:

BEFORE triggers run the trigger action before the triggering statement is run.

AFTER triggers run the trigger action after the triggering statement is run.

Stored Procedures are created to perform one or more DML operations on Database. It is nothing but the group of SQL statements that accepts some input in the form of parameters and performs some task and may or may not returns a value.

Syntax : Creating a Procedure

```
CREATE or REPLACE PROCEDURE name(parameters)

IS

variables;

BEGIN

//statements;

END;
```

The most important part is parameters. Parameters are used to pass values to the Procedure. There are 3 different types of parameters, they are as follows:

IN:

This is the Default Parameter for the procedure. It always recieves the values from calling program.

OUT:

This parameter always sends the values to the calling program.

IN OUT:

This parameter performs both the operations. It Receives value from as well as sends the values to the calling program.

Views in SQL are kind of virtual tables. A view also has rows and columns as they are in a real table in the database. We can create a view by selecting fields from one or more tables present in the database. A View can either have all the rows of a table or specific rows based on certain condition.

Syntax:

```
CREATE VIEW view_name AS

SELECT column1, column2.....

FROM table_name

WHERE condition;
```

view_name: Name for the View

table_name: Name of the table

condition: Condition to select rows

Functions

For doing operations on data sql has many built-in functions, they are categorised in two categories and further sub-categorised in different seven functions under each category. The categories are:

Aggregate functions:

These functions are used to do operations from the values of the column and a single value is returned.

AVG()

COUNT()

FIRST()

LAST()

MAX()

MIN()

SUM()

Scalar functions:

These functions are based on user input, these too returns single value.

UCASE()

LCASE()

MID()

LEN()

ROUND()

NOW()

FORMAT()