

```
CREATE DATABASE SoftwareHouse;
USE SoftwareHouse;
SET SQL_SAFE_UPDATES = 0;
```

#-----% Table Creation %

CREATE TABLE Client (

ClientID	INT	NOT NULL ,
FirstName	VARCHAR(255)	NOT NULL,
LastName	VARCHAR(255)	NOT NULL,
Email	VARCHAR(255)	NOT NULL,
Phone	VARCHAR(255)	NOT NULL,
Address	VARCHAR(255)	NOT NULL,
PRIMARY KEY (ClientID)		

);

Field	Type	Null	Key	Default	Extra
ClientID	int	NO	PRI	NULL	
FirstName	varchar(255)	NO		NULL	
LastName	varchar(255)	NO		NULL	
Email	varchar(255)	NO		NULL	
Phone	varchar(255)	NO		NULL	
Address	varchar(255)	NO		NULL	

Result 9 x Read Only

CREATE TABLE Employee (

EmployeeID	INT	NOT NULL ,
FirstName	VARCHAR(255)	NOT NULL,
LastName	VARCHAR(255)	NOT NULL,
Email	VARCHAR(255)	NOT NULL,
Phone	VARCHAR(255)	NOT NULL,
Address	VARCHAR(255)	NOT NULL,
HireDate	DATE	NOT NULL,
Salary	INT	NOT NULL,
PRIMARY KEY (EmployeeID)		

);

Field	Type	Null	Key	Default	Extra
EmployeeID	int	NO	PRI	NULL	
FirstName	varchar(255)	NO		NULL	
LastName	varchar(255)	NO		NULL	
Email	varchar(255)	NO		NULL	
Phone	varchar(255)	NO		NULL	
Address	varchar(255)	NO		NULL	
HireDate	date	NO		NULL	
Salary	int	NO		NULL	

Result 10 x Read Only

CREATE TABLE Project (

ProjectID	INT	NOT NULL ,
Title	VARCHAR(255)	NOT NULL,
Description	VARCHAR(255)	NOT NULL,
StartDate	DATE	NOT NULL,
EndDate	DATE	NOT NULL,
PRIMARY KEY (ProjectID)		

);



Field	Type	Null	Key	Default	Extra
ProjectID	int	NO	PRI	NULL	
Title	varchar(255)	NO		NULL	
Description	varchar(255)	NO		NULL	
StartDate	date	NO		NULL	
EndDate	date	NO		NULL	

CREATE TABLE Task (

TaskID	INT	NOT NULL ,
Description	VARCHAR(255)	NOT NULL,
StartDate	DATE	NOT NULL,
EndDate	DATE	NOT NULL,
PRIMARY KEY (TaskID)		

);

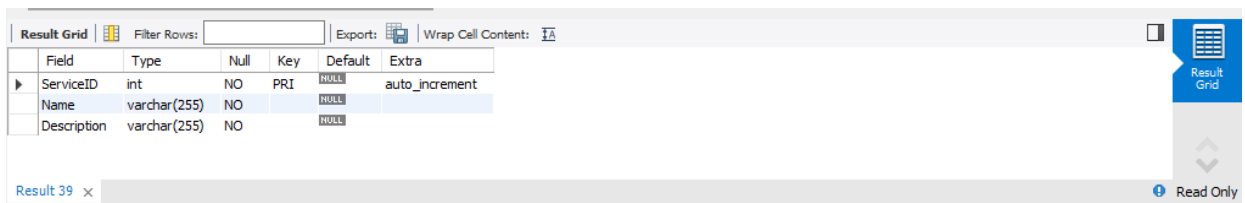


Field	Type	Null	Key	Default	Extra
TaskID	int	NO	PRI	NULL	
Description	varchar(255)	NO		NULL	
StartDate	date	NO		NULL	
EndDate	date	NO		NULL	
ProjectID	int	NO		NULL	
EmployeeID	int	NO		NULL	

CREATE TABLE Service (

ServiceID	INT	NOT NULL,
Name	VARCHAR(255)	NOT NULL,
Description	VARCHAR(255)	NOT NULL,
PRIMARY KEY (ServiceID)		

);

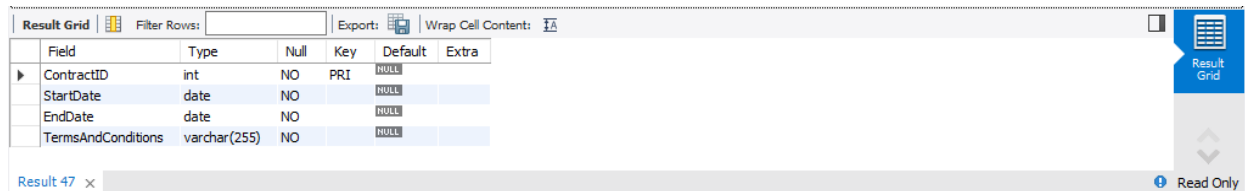


Field	Type	Null	Key	Default	Extra
ServiceID	int	NO	PRI	NULL	auto_increment
Name	varchar(255)	NO		NULL	
Description	varchar(255)	NO		NULL	

CREATE TABLE Contract (

ContractID	INT	NOT NULL ,
StartDate	DATE	NOT NULL,
EndDate	DATE	NOT NULL,
TermsAndConditions	VARCHAR(255)	NOT NULL,
PRIMARY KEY (ContractID)		

);



Field	Type	Null	Key	Default	Extra
ContractID	int	NO	PRI	NULL	
StartDate	date	NO		NULL	
EndDate	date	NO		NULL	
TermsAndConditions	varchar(255)	NO		NULL	

CREATE TABLE Payment (

PaymentID	INT	NOT NULL ,
Amount	INT	NOT NULL,
PaymentDate	DATE	NOT NULL,
PRIMARY KEY (PaymentID)		

);

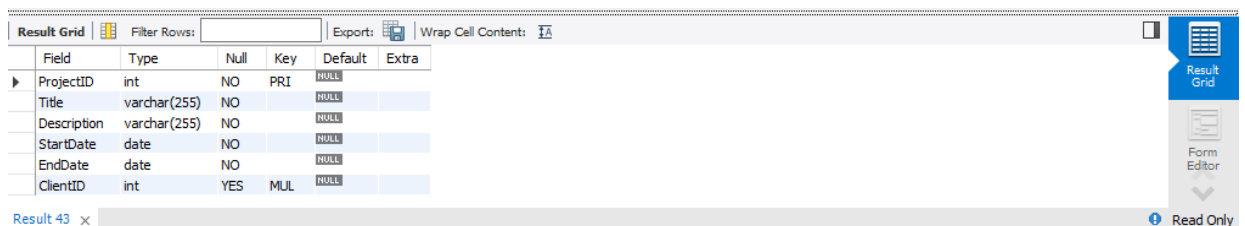


Field	Type	Null	Key	Default	Extra
PaymentID	int	NO	PRI	NULL	
Amount	int	NO		NULL	
PaymentDate	date	NO		NULL	

#-----% Adding Foreign Keys %

ALTER TABLE Project

ADD ClientID INT,
ADD FOREIGN KEY (ClientID)
REFERENCES Client (ClientID)
ON DELETE CASCADE
ON UPDATE CASCADE;



Field	Type	Null	Key	Default	Extra
ProjectID	int	NO	PRI	NULL	
Title	varchar(255)	NO		NULL	
Description	varchar(255)	NO		NULL	
StartDate	date	NO		NULL	
EndDate	date	NO		NULL	
ClientID	int	YES	MUL	NULL	

ALTER TABLE Task

ADD ProjectID INT,
ADD FOREIGN KEY (ProjectID)
REFERENCES Project (ProjectID)
ON DELETE CASCADE
ON UPDATE CASCADE;

Field	Type	Null	Key	Default	Extra
TaskID	int	NO	PRI	NULL	
Description	varchar(255)	NO		NULL	
StartDate	date	NO		NULL	
EndDate	date	NO		NULL	
ProjectID	int	YES	MUL	NULL	

ALTER TABLE Task

ADD EmployeeID INT,
ADD FOREIGN KEY (EmployeeID)
REFERENCES Employee (EmployeeID)
ON DELETE CASCADE
ON UPDATE CASCADE;

Field	Type	Null	Key	Default	Extra
TaskID	int	NO	PRI	NULL	
Description	varchar(255)	NO		NULL	
StartDate	date	NO		NULL	
EndDate	date	NO		NULL	
ProjectID	int	YES	MUL	NULL	
EmployeeID	int	YES	MUL	NULL	

ALTER TABLE Contract

ADD ServiceID INT,
ADD FOREIGN KEY (ServiceID)
REFERENCES Service (ServiceID)
ON DELETE CASCADE
ON UPDATE CASCADE;

Field	Type	Null	Key	Default	Extra
ContractID	int	NO	PRI	NULL	
StartDate	date	NO		NULL	
EndDate	date	NO		NULL	
TermsAndConditions	varchar(255)	NO		NULL	
ServiceID	int	YES	MUL	NULL	

ALTER TABLE Contract

ADD ClientID INT

ADD FOREIGN KEY (ClientID)

REFERENCES Client (ClientID)

ON DELETE CASCADE

ON UPDATE CASCADE;

Field	Type	Null	Key	Default	Extra
ContractID	int	NO	PRI	NULL	
StartDate	date	NO		NULL	
EndDate	date	NO		NULL	
TermsAndConditions	varchar(255)	NO		NULL	
ServiceID	int	YES	MUL	NULL	
ClientID	int	YES	MUL	NULL	

ALTER TABLE Contract

ADD EmployeeID INT

ADD FOREIGN KEY (EmployeeID)

REFERENCES Employee (EmployeeID)

ON DELETE CASCADE

ON UPDATE CASCADE;

Field	Type	Null	Key	Default	Extra
ContractID	int	NO	PRI	NULL	
StartDate	date	NO		NULL	
EndDate	date	NO		NULL	
TermsAndConditions	varchar(255)	NO		NULL	
ServiceID	int	YES	MUL	NULL	
ClientID	int	YES	MUL	NULL	
EmployeeID	int	YES	MUL	NULL	

ALTER TABLE Payment

ADD ContractID INT,

ADD FOREIGN KEY (ContractID)

REFERENCES Contract (ContractID)

ON DELETE CASCADE

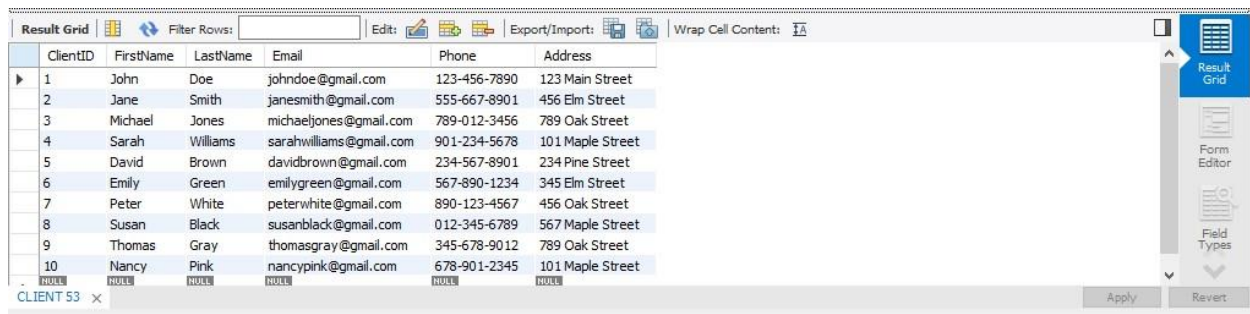
ON UPDATE CASCADE;

Field	Type	Null	Key	Default	Extra
PaymentID	int	NO	PRI	NULL	
Amount	int	NO		NULL	
PaymentDate	date	NO		NULL	
ContractID	int	YES	MUL	NULL	

#-----% Inserting Data %

INSERT INTO Client (ClientID, FirstName, LastName, Email, Phone, Address)
VALUES

(1, 'John', 'Doe', 'johndoe@gmail.com', '123-456-7890', '123 Main Street'),
(2, 'Jane', 'Smith', 'janesmith@gmail.com', '555-667-8901', '456 Elm Street'),
(3, 'Michael', 'Jones', 'michaeljones@gmail.com', '789-012-3456', '789 Oak Street'),
(4, 'Sarah', 'Williams', 'sarahwilliams@gmail.com', '901-234-5678', '101 Maple Street'),
(5, 'David', 'Brown', 'davidbrown@gmail.com', '234-567-8901', '234 Pine Street'),
(6, 'Emily', 'Green', 'emilygreen@gmail.com', '567-890-1234', '345 Elm Street'),
(7, 'Peter', 'White', 'peterwhite@gmail.com', '890-123-4567', '456 Oak Street'),
(8, 'Susan', 'Black', 'susanblack@gmail.com', '012-345-6789', '567 Maple Street'),
(9, 'Thomas', 'Gray', 'thomasgray@gmail.com', '345-678-9012', '789 Oak Street'),
(10, 'Nancy', 'Pink', 'nancypink@gmail.com', '678-901-2345', '101 Maple Street');



ClientID	FirstName	LastName	Email	Phone	Address
1	John	Doe	johndoe@gmail.com	123-456-7890	123 Main Street
2	Jane	Smith	janesmith@gmail.com	555-667-8901	456 Elm Street
3	Michael	Jones	michaeljones@gmail.com	789-012-3456	789 Oak Street
4	Sarah	Williams	sarahwilliams@gmail.com	901-234-5678	101 Maple Street
5	David	Brown	davidbrown@gmail.com	234-567-8901	234 Pine Street
6	Emily	Green	emilygreen@gmail.com	567-890-1234	345 Elm Street
7	Peter	White	peterwhite@gmail.com	890-123-4567	456 Oak Street
8	Susan	Black	susanblack@gmail.com	012-345-6789	567 Maple Street
9	Thomas	Gray	thomasgray@gmail.com	345-678-9012	789 Oak Street
10	Nancy	Pink	nancypink@gmail.com	678-901-2345	101 Maple Street

INSERT INTO Employee (EmployeeID, FirstName, LastName, Email, Phone, Address, HireDate, Salary)

VALUES

(1, "John", "Doe", "johndoe@example.com", "555-555-1212", "21 Oslo St", "2022-02-01", 52000),
(2, "Jane", "Doe", "janedoe@example.com", "555-555-1212", "23 Greenfield Rd", "2021-04-01", 55000),
(3, "Bob", "Smith", "bobsmith@example.com", "555-555-1212", "143 Main St", "2009-01-01", 80000),
(4, "Sue", "Johnson", "suejohnson@example.com", "555-555-1212", "113 Main Rd", "2021-11-01", 60000),
(5, "Mike", "Brown", "mikebrown@example.com", "555-555-1212", "21 Main Victoria Rd", "2007-11-01", 90000),
(6, "Mary", "Jones", "maryjones@example.com", "555-555-1212", "87 Victoria St", "2018-10-01", 10000),
(7, "Tom", "Wilson", "tomwilson@example.com", "555-555-1212", "122 Main Rd", "2023-08-01", 30000),
(8, "Lisa", "Davis", "lisadavis@example.com", "555-555-1212", "123 Victoria Road", "2021/03/01", "40000"),

```
(9,"Bill","Miller","billmiller@example.com","555.555.1212","139 Main
St","2012/08/01","50000"),
(10,"Karen","Taylor","karentaylor@example.com","555.555.1212","256 Victoria
St","2020/05/01","20000");
```

EmployeeID	FirstName	LastName	Email	Phone	Address	HireDate	Salary
1	John	Doe	john.doe@example.com	555-555-1212	21 Oslo St	2022-02-01	52000
2	Jane	Doe	janedoe@example.com	555-555-1212	23 Greenfield Rd	2021-04-01	55000
3	Bob	Smith	bobsmith@example.com	555-555-1212	143 Main St	2009-01-01	80000
4	Sue	Johnson	suejohnson@example.com	555-555-1212	113 Main Rd	2021-11-01	60000
5	Mike	Brown	mikebrown@example.com	555-555-1212	21 Main Victoria Rd	2007-11-01	90000
6	Mary	Jones	maryjones@example.com	555-555-1212	87 Victoria St	2018-10-01	10000
7	Tom	Wilson	tomwilson@example.com	555-555-1212	122 Main Rd	2023-08-01	30000
8	Lisa	Davis	lisadavis@example.com	555-555-1212	123 Victoria Road	2021-03-01	40000
9	Bill	Miller	billmiller@example.com	555.555.1212	139 Main St	2012-08-01	50000
10	Karen	Taylor	karentaylor@example.com	555.555.1212	256 Victoria St	2020-05-01	20000

INSERT INTO Project (ProjectID, Title, Description, StartDate, EndDate, ClientID) VALUES

```
(1, 'Inventory Manager', 'Develop a new software application to manage inventory.',
'2023-01-01', '2023-03-01', 1),
(2, 'Website Development', 'Design and build a new website to promote products and
services.', '2023-02-01', '2023-04-01', 2),
(3, 'Marketing Campaign', 'Implement a new marketing campaign using print, online, and social
media.', '2023-03-01', '2023-05-01', 3),
(4, 'Market Research', 'Conduct market research to understand target market and needs.',
'2023-04-01', '2023-06-01', 4),
(5, 'White Paper', 'Write a white paper to educate customers about new technology.',
'2023-05-01', '2023-07-01', 5),
(6, 'Training Program', 'Create a new training program to train employees on new software
application.', '2023-06-01', '2023-08-01', 6),
(7, 'Product', 'Develop a new product to solve a specific problem.', '2023-07-01', '2023-09-01',
7),
(8, 'Customer Support', 'Provide customer support via phone, email, and chat.', '2023-08-01',
'2023-10-01', 8),
(9, 'Management', 'Manage a project to develop new software application.', '2023-09-01',
'2023-11-01', 9),
(10, 'Website', 'Deliver a project on time and within budget to develop new website.',
'2023-10-01', '2023-12-01', 10);
```

ProjectID	Title	Description	StartDate	EndDate	ClientID
1	Inventory Manager	Develop a new software application to manage i...	2023-01-01	2023-03-01	1
2	Website Development	Design and build a new website to promote pro...	2023-02-01	2023-04-01	2
3	Marketing Campaign	Implement a new marketing campaign using prin...	2023-03-01	2023-05-01	3
4	Market Research	Conduct market research to understand target ...	2023-04-01	2023-06-01	4
5	White Paper	Write a white paper to educate customers abou...	2023-05-01	2023-07-01	5
6	Training Program	Create a new training program to train employe...	2023-06-01	2023-08-01	6
7	Product	Develop a new product to solve a specific probl...	2023-07-01	2023-09-01	7
8	Customer Support	Provide Develop a new product to solve a specific problem.	2023-08-01	2023-10-01	8
9	Management	Manage a project to develop new software appl...	2023-09-01	2023-11-01	9
10	Website	Deliver a project on time and within budget to d...	2023-10-01	2023-12-01	10

INSERT INTO Task (TaskID, Description, StartDate, EndDate, ProjectID, EmployeeID)
VALUES

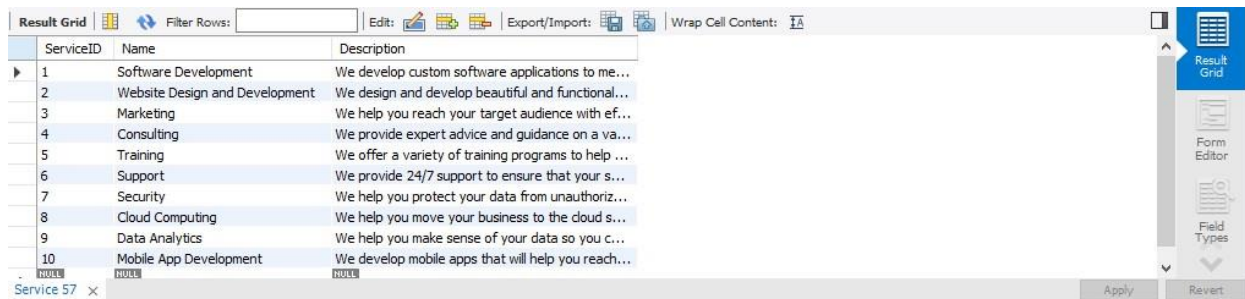
(1, 'Develop the user interface.', '2023-01-01', '2023-03-01', 1, 1),
 (2, 'Develop the database.', '2023-02-01', '2023-04-01', 1, 2),
 (3, 'Implement the user stories.', '2023-03-01', '2023-05-01', 1, 3),
 (4, 'Write the unit tests.', '2023-04-01', '2023-06-01', 1, 4),
 (5, 'Integrate the modules.', '2023-05-01', '2023-07-01', 1, 5),
 (6, 'Deploy the application.', '2023-06-01', '2023-08-01', 1, 6),
 (7, 'Test the application.', '2023-07-01', '2023-09-01', 1, 7),
 (8, 'Fix bugs.', '2023-08-01', '2023-10-01', 1, 8),
 (9, 'Release the application.', '2023-09-01', '2023-11-01', 1, 9),
 (10, 'Provide support to users.', '2023-10-01', '2023-12-01', 1, 10);

TaskID	Description	StartDate	EndDate	ProjectID	EmployeeID
1	Develop the user interface.	2023-01-01	2023-03-01	1	1
2	Develop the database.	2023-02-01	2023-04-01	1	2
3	Implement the user stories.	2023-03-01	2023-05-01	1	3
4	Write the unit tests.	2023-04-01	2023-06-01	1	4
5	Integrate the modules.	2023-05-01	2023-07-01	1	5
6	Deploy the application.	2023-06-01	2023-08-01	1	6
7	Test the application.	2023-07-01	2023-09-01	1	7
8	Fix bugs.	2023-08-01	2023-10-01	1	8
9	Release the application.	2023-09-01	2023-11-01	1	9
10	Provide support to users.	2023-10-01	2023-12-01	1	10

INSERT INTO Service (ServiceID, Name, Description)
VALUES

(1, 'Software Development', 'We develop custom software applications to meet your business needs.'),
 (2, 'Website Design and Development', 'We design and develop beautiful and functional websites that will help you grow your business.'),
 (3, 'Marketing', 'We help you reach your target audience with effective marketing campaigns.'),
 (4, 'Consulting', 'We provide expert advice and guidance on a variety of business-related topics.'),
 (5, 'Training', 'We offer a variety of training programs to help you and your employees develop the skills you need to succeed.'),
 (6, 'Support', 'We provide 24/7 support to ensure that your software applications and websites are always up and running.'),

(7, 'Security', 'We help you protect your data from unauthorized access.'),
 (8, 'Cloud Computing', 'We help you move your business to the cloud so you can save money and improve efficiency.'),
 (9, 'Data Analytics', 'We help you make sense of your data so you can make better business decisions.'),
 (10, 'Mobile App Development', 'We develop mobile apps that will help you reach your target audience on their mobile devices.');



The screenshot shows a 'Result Grid' application window. It features a table with 10 rows and 3 columns: ServiceID, Name, and Description. The rows are numbered 1 through 10. To the right of the table is a vertical toolbar with icons for 'Result Grid', 'Form Editor', and 'Field Types'. At the bottom right are 'Apply' and 'Revert' buttons.

ServiceID	Name	Description
1	Software Development	We develop custom software applications to me...
2	Website Design and Development	We design and develop beautiful and functional...
3	Marketing	We help you reach your target audience with ef...
4	Consulting	We provide expert advice and guidance on a va...
5	Training	We offer a variety of training programs to help ...
6	Support	We provide 24/7 support to ensure that your s...
7	Security	We help you protect your data from unauthoriz...
8	Cloud Computing	We help you move your business to the cloud s...
9	Data Analytics	We help you make sense of your data so you c...
10	Mobile App Development	We develop mobile apps that will help you reach...

INSERT INTO Contract (ContractID, ServiceID, ClientID, EmployeeID, StartDate, EndDate, TermsAndConditions)

VALUES

(1, 1, 1, 1, '2023-01-01', '2023-03-01', 'This is the contract terms and conditions for Inventory Manager Project.'),
 (2, 2, 2, 2, '2023-02-01', '2023-04-01', 'This is the contract terms and conditions for Website Developement.'),
 (3, 3, 3, 3, '2023-03-01', '2023-05-01', 'This is the contract terms and conditions for Marketing Campaign.'),
 (4, 4, 4, 4, '2023-04-01', '2023-06-01', 'This is the contract terms and conditions for Market Research.'),
 (5, 5, 5, 5, '2023-05-01', '2023-07-01', 'This is the contract terms and conditions for White Paper.'),
 (6, 6, 6, 6, '2023-06-01', '2023-08-01', 'This is the contract terms and conditions for Training Program.'),
 (7, 7, 7, 7, '2023-07-01', '2023-09-01', 'This is the contract terms and conditions for Product.'),
 (8, 8, 8, 8, '2023-08-01', '2023-10-01', 'This is the contract terms and conditions for Customer Support.'),
 (9, 9, 9, 9, '2023-09-01', '2023-11-01', 'This is the contract terms and conditions for Management.'),
 (10, 10, 10, 10, '2023-10-01', '2023-12-01', 'This is the contract terms and conditions for Website.');

ContractID	StartDate	EndDate	TermsAndConditions	ServiceID	ClientID	EmployeeID
1	2023-01-01	2023-03-01	This is the contract terms and conditions for Inv...	1	1	1
2	2023-02-01	2023-04-01	This is the contract terms and conditions for We...	2	2	2
3	2023-03-01	2023-05-01	This is the contract terms and conditions for Ma...	3	3	3
4	2023-04-01	2023-06-01	This is the contract terms and conditions for Ma...	4	4	4
5	2023-05-01	2023-07-01	This is the contract terms and conditions for Wh...	5	5	5
6	2023-06-01	2023-08-01	This is the contract terms and conditions for Tra...	6	6	6
7	2023-07-01	2023-09-01	This is the contract terms and conditions for Pro...	7	7	7
8	2023-08-01	2023-10-01	This is the contract terms and conditions for Cu...	8	8	8
9	2023-09-01	2023-11-01	This is the contract terms and conditions for Ma...	9	9	9
10	2023-10-01	2023-12-01	This is the contract terms and conditions for We...	10	10	10

INSERT INTO Payment (PaymentID, ContractID, Amount, PaymentDate)
VALUES

(1, 1, 1000, '2023-01-01'),
 (2, 2, 2000, '2023-02-01'),
 (3, 3, 3000, '2023-03-01'),
 (4, 4, 4000, '2023-04-01'),
 (5, 5, 5000, '2023-05-01'),
 (6, 6, 6000, '2023-06-01'),
 (7, 7, 7000, '2023-07-01'),
 (8, 8, 8000, '2023-08-01'),
 (9, 9, 9000, '2023-09-01'),
 (10, 10, 10000, '2023-10-01');

PaymentID	Amount	PaymentDate	ContractID
1	1000	2023-01-01	1
2	2000	2023-02-01	2
3	3000	2023-03-01	3
4	4000	2023-04-01	4
5	5000	2023-05-01	5
6	6000	2023-06-01	6
7	7000	2023-07-01	7
8	8000	2023-08-01	8
9	9000	2023-09-01	9
10	10000	2023-10-01	10

#-----% Updation %

UPDATE Client

```
SET FirstName = 'James'  
WHERE ClientID = 1;
```

UPDATE Client

```
SET Phone = '545-545-1216'  
WHERE ClientID = 5;
```

UPDATE Client

```
SET Address = '781 Oak Street'  
WHERE ClientID = 2;
```

UPDATE Client

```
SET Phone = '555-555-1314'  
WHERE ClientID = 3;
```

UPDATE Client

```
SET FirstName = 'Jack'  
WHERE ClientID = 7;
```

Result Grid

Filter Rows:

Edit

Export/Import:

Wrap Cell Content:

	ClientID	FirstName	LastName	Email	Phone	Address
▶	1	James	Doe	johndoe@gmail.com	123-456-7890	123 Main Street
	2	Jane	Smith	janesmith@gmail.com	555-667-8901	781 Oak Street
	3	Michael	Jones	michaeljones@gmail.com	555-555-1314	789 Oak Street
	4	Sarah	Williams	sarahwilliams@gmail.com	901-234-5678	101 Maple Street
	5	David	Brown	davidbrown@gmail.com	545-545-1216	234 Pine Street
	6	Emily	Green	emilygreen@gmail.com	567-890-1234	345 Elm Street
	7	Jack	White	peterwhite@gmail.com	890-123-4567	456 Oak Street
	8	Susan	Black	susanblack@gmail.com	012-345-6789	567 Maple Street
	9	Thomas	Gray	thomasgray@gmail.com	345-678-9012	789 Oak Street
	10	Nancy	Pink	nancypink@gmail.com	678-901-2345	101 Maple Street

client 60 x

Apply

Revert

Result Grid

Form Editor

Field Types

UPDATE Employee

```
SET FirstName = 'John',  
LastName = 'Doe'  
WHERE EmployeeID = 1;
```

UPDATE Employee

```
SET Salary = 200500  
WHERE EmployeeID = 2;
```

UPDATE Employee

```
SET Address = '21 Brookfield St'  
WHERE EmployeeID = 8;
```

UPDATE Employee

SET Salary = 100000

WHERE EmployeeID = 3;

UPDATE Employee

SET LastName = 'David'

WHERE EmployeeID = 4;

EmployeeID	FirstName	LastName	Email	Phone	Address	HireDate	Salary
1	John	Doe	johndoe@example.com	555-555-1212	21 Oslo St	2022-02-01	52000
2	Jane	Doe	janedoe@example.com	555-555-1212	23 Greenfield Rd	2021-04-01	200500
3	Bob	Smith	bobsmith@example.com	555-555-1212	143 Main St	2009-01-01	100000
4	Sue	David	suejohnson@example.com	555-555-1212	113 Main Rd	2021-11-01	60000
5	Mike	Brown	mikebrown@example.com	555-555-1212	21 Main Victoria Rd	2007-11-01	90000
6	Mary	Jones	maryjones@example.com	555-555-1212	87 Victoria St	2018-10-01	10000
7	Tom	Wilson	tomwilson@example.com	555-555-1212	122 Main Rd	2023-08-01	30000
8	Lisa	Davis	lisadavis@example.com	555-555-1212	21 Brookfield St	2021-03-01	40000
9	Bill	Miller	billmiller@example.com	555.555.1212	139 Main St	2012-08-01	50000
10	Karen	Taylor	karentaylor@example.com	555.555.1212	256 Victoria St	2020-05-01	20000

UPDATE Project

SET Title = "Inventory Management System"

WHERE ProjectID = 1;

UPDATE Project

SET StartDate = "2010-04-01"

WHERE ProjectID = 8;

UPDATE Project

SET Description = "Only Build a new website to promote products and services."

WHERE ProjectID = 2;

UPDATE Project

SET StartDate = "2023-06-01"

WHERE ProjectID = 3;

UPDATE Project

SET Title = "Inventory Management System"

WHERE ProjectID = 9;

Result Grid						
Filter Rows:		Edit:		Export/Import:		Wrap Cell Content: FA
ProjectID	Title	Description	StartDate	EndDate	ClientID	
1	Inventory Management System	Develop a new software application to manage i...	2023-01-01	2023-03-01	1	
2	Website Development	Only Build a new website to promote products a...	2023-02-01	2023-04-01	2	
3	Marketing Campaign	Implement a new marketing campaign using prin...	2023-06-01	2023-05-01	3	
4	Market Research	Conduct market research to understand target ...	2023-04-01	2023-06-01	4	
5	White Paper	Write a white paper to educate customers abou...	2023-05-01	2023-07-01	5	
6	Training Program	Create a new training program to train employe...	2023-06-01	2023-08-01	6	
7	Product	Develop a new product to solve a specific probl...	2023-07-01	2023-09-01	7	
8	Customer Support	Provide customer support via phone, email, and...	2010-04-01	2023-10-01	8	
9	Inventory Management System	Manage a project to develop new software appl...	2023-09-01	2023-11-01	9	
10	Website	Deliver a project on time and within budget to d...	2023-10-01	2023-12-01	10	

UPDATE task

SET EndDate = "2023-12-01"

WHERE TaskID = 8;

UPDATE task

SET EndDate = "2019-02-03"

WHERE TaskID = 5;

UPDATE task

SET Description = "Developing backend."

WHERE TaskID = 2;

UPDATE task

SET EndDate = "2023-09-01"

WHERE TaskID = 3;

UPDATE task

SET Description = "Testing"

WHERE TaskID = 7;

Result Grid						
Filter Rows:		Edit:		Export/Import:		Wrap Cell Content: FA
TaskID	Description	StartDate	EndDate	ProjectID	EmployeeID	
1	Develop the user interface.	2023-01-01	2023-03-01	1	1	
2	Developing backend.	2023-02-01	2023-04-01	1	2	
3	Implement the user stories.	2023-03-01	2023-09-01	1	3	
4	Write the unit tests.	2023-04-01	2023-06-01	1	4	
5	Integrate the modules.	2023-05-01	2019-02-03	1	5	
6	Deploy the application.	2023-06-01	2023-08-01	1	6	
7	Testing	2023-07-01	2023-09-01	1	7	
8	Fix bugs.	2023-08-01	2023-12-01	1	8	
9	Release the application.	2023-09-01	2023-11-01	1	9	
10	Provide support to users.	2023-10-01	2023-12-01	1	10	

UPDATE Service

```
SET Name = 'Software Developement Service'  
WHERE ServiceID = 1;
```

UPDATE Service

```
SET Description = 'New Description'  
WHERE ServiceID = 2;
```

UPDATE Service

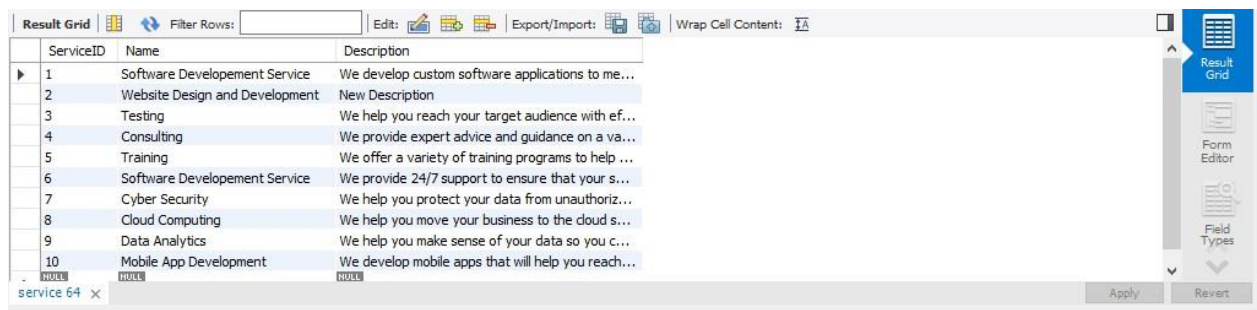
```
SET Name = 'Cyber Security'  
WHERE ServiceID = 7;
```

UPDATE Service

```
SET Name = 'Testing'  
WHERE ServiceID = 3;
```

UPDATE Service

```
SET Name = 'Software Developement Service'  
WHERE ServiceID = 6;
```



ServiceID	Name	Description
1	Software Development Service	We develop custom software applications to me...
2	Website Design and Development	New Description
3	Testing	We help you reach your target audience with ef...
4	Consulting	We provide expert advice and guidance on a va...
5	Training	We offer a variety of training programs to help ...
6	Software Developement Service	We provide 24/7 support to ensure that your s...
7	Cyber Security	We help you protect your data from unauthoriz...
8	Cloud Computing	We help you move your business to the cloud s...
9	Data Analytics	We help you make sense of your data so you c...
10	Mobile App Development	We develop mobile apps that will help you reach...

UPDATE Contract

```
SET EndDate = '2023-03-01'  
WHERE StartDate = '2023-01-01';
```

UPDATE Contract

```
SET TermsAndConditions = 'This is the new contract terms and conditions for Service 1.'  
WHERE ServiceID = 1;
```

UPDATE Contract

```
SET EmployeeID = 2  
WHERE ClientID = 2;
```

UPDATE Contract

```
SET EndDate = '2023-03-01'  
WHERE ContractID = 3;
```

UPDATE Contract

SET EndDate = '2023-03-01'

WHERE ServiceID = 3;

ContractID	StartDate	EndDate	TermsAndConditions	ServiceID	ClientID	EmployeeID
1	2023-01-01	2023-03-01	This is the new contract terms and conditions fo...	1	1	1
2	2023-02-01	2023-04-01	This is the contract terms and conditions for We...	2	2	2
3	2023-03-01	2023-03-01	This is the contract terms and conditions for Ma...	3	3	3
4	2023-04-01	2023-06-01	This is the contract terms and conditions for Ma...	4	4	4
5	2023-05-01	2023-07-01	This is the contract terms and conditions for Wh...	5	5	5
6	2023-06-01	2023-08-01	This is the contract terms and conditions for Tra...	6	6	6
7	2023-07-01	2023-09-01	This is the contract terms and conditions for Pro...	7	7	7
8	2023-08-01	2023-10-01	This is the contract terms and conditions for Cu...	8	8	8
9	2023-09-01	2023-11-01	This is the contract terms and conditions for Ma...	9	9	9
10	2023-10-01	2023-12-01	This is the contract terms and conditions for We...	10	10	10

UPDATE Payment

SET Amount = 2000

WHERE ContractID = 1;

UPDATE Payment

SET PaymentDate = '2023-03-01'

WHERE PaymentID = 5;

UPDATE Payment

SET PaymentDate = '2023-06-01'

WHERE Amount > 5000;

UPDATE Payment

SET PaymentDate = '2022-08-01'

WHERE Amount < 8000;

UPDATE Payment

SET Amount = 22000

WHERE ContractID = 8;

PaymentID	Amount	PaymentDate	ContractID
1	2000	2022-08-01	1
2	2000	2022-08-01	2
3	3000	2022-08-01	3
4	4000	2022-08-01	4
5	5000	2022-08-01	5
6	6000	2022-08-01	6
7	7000	2022-08-01	7
8	22000	2023-06-01	8
9	9000	2023-06-01	9
10	10000	2023-06-01	10

#-----% SELECT %

```
SELECT *
FROM Employee
WHERE HireDate > '2022-01-01';
```

EmployeeID	FirstName	LastName	Email	Phone	Address	HireDate	Salary
1	John	Doe	johndoe@example.com	555-555-1212	21 Oslo St	2022-02-01	52000
7	Tom	Wilson	tomwilson@example.com	555-555-1212	122 Main Rd	2023-08-01	30000
NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL

```
SELECT Title, StartDate
FROM Project;
```

Title	StartDate
Inventory Management System	2023-01-01
Website Development	2023-02-01
Marketing Campaign	2023-06-01
Market Research	2023-04-01
White Paper	2023-05-01
Training Program	2023-06-01
Product	2023-07-01
Customer Support	2010-04-01
Inventory Management System	2023-09-01

```
SELECT *
FROM Employee
WHERE Salary > 50000;
```

EmployeeID	FirstName	LastName	Email	Phone	Address	HireDate	Salary
1	John	Doe	johndoe@example.com	555-555-1212	21 Oslo St	2022-02-01	52000
2	Jane	Doe	janedoe@example.com	555-555-1212	23 Greenfield Rd	2021-04-01	200500
3	Bob	Smith	bobsmith@example.com	555-555-1212	143 Main St	2009-01-01	100000
4	Sue	David	suejohnson@example.com	555-555-1212	113 Main Rd	2021-11-01	60000
5	Mike	Brown	mikebrown@example.com	555-555-1212	21 Main Victoria Rd	2007-11-01	90000
NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL


```

SELECT *
FROM Client
WHERE Email LIKE '%@gmail.com';

```

ClientID	FirstName	LastName	Email	Phone	Address
1	James	Doe	johndoe@gmail.com	123-456-7890	123 Main Street
2	Jane	Smith	janesmith@gmail.com	555-667-8901	781 Oak Street
3	Michael	Jones	michaeljones@gmail.com	555-555-1314	789 Oak Street
4	Sarah	Williams	sarahwilliams@gmail.com	901-234-5678	101 Maple Street
5	David	Brown	davidbrown@gmail.com	545-545-1216	234 Pine Street
6	Emily	Green	emilygreen@gmail.com	567-890-1234	345 Elm Street
7	Jack	White	peterwhite@gmail.com	890-123-4567	456 Oak Street
8	Susan	Black	susanblack@gmail.com	012-345-6789	567 Maple Street
9	Thomas	Gray	thomasgray@gmail.com	345-678-9012	789 Oak Street

```

SELECT *
FROM Employee
WHERE Salary < 50000;

```

EmployeeID	FirstName	LastName	Email	Phone	Address	HireDate	Salary
6	Mary	Jones	maryjones@example.com	555-555-1212	87 Victoria St	2018-10-01	10000
7	Tom	Wilson	tomwilson@example.com	555-555-1212	122 Main Rd	2023-08-01	30000
8	Lisa	Davis	lisadavis@example.com	555-555-1212	21 Brookfield St	2021-03-01	40000
10	Karen	Taylor	karentaylor@example.com	555.555.1212	256 Victoria St	2020-05-01	20000
*	NULL	NULL	NULL	NULL	NULL	NULL	NULL

#-----% JOINS %

```

SELECT
Task.*, Project.*, Client.*, Employee.*
FROM Task
JOIN Project
ON Task.ProjectID = Project.ProjectID
JOIN Client
ON Project.ClientID = Client.ClientID
JOIN Employee
ON Task.EmployeeID = Employee.EmployeeID;

```

TaskID	Description	StartDate	EndDate	ProjectID	EmployeeID	ProjectID	Title	Description
1	Develop the user interface.	2023-01-01	2023-03-01	1	1	1	Inventory Management System	Develop a new software application to ma
2	Developing backend.	2023-02-01	2023-04-01	1	2	1	Inventory Management System	Develop a new software application to ma
3	Implement the user stories.	2023-03-01	2023-09-01	1	3	1	Inventory Management System	Develop a new software application to ma
4	Write the unit tests.	2023-04-01	2023-06-01	1	4	1	Inventory Management System	Develop a new software application to ma
5	Integrate the modules.	2023-05-01	2019-02-03	1	5	1	Inventory Management System	Develop a new software application to ma
6	Deploy the application.	2023-06-01	2023-08-01	1	6	1	Inventory Management System	Develop a new software application to ma

```

SELECT
Client.*, Project.*
FROM Client
JOIN Project
ON Client.ClientID = Project.ClientID;

```

ClientID	FirstName	LastName	Email	Phone	Address	ProjectID	Title	Description
1	James	Doe	johndoe@gmail.com	123-456-7890	123 Main Street	1	Inventory Management System	Develop a new software application t
2	Jane	Smith	janesmith@gmail.com	555-667-8901	781 Oak Street	2	Website Development	Only Build a new website to promote
3	Michael	Jones	michaeljones@gmail.com	555-555-1314	789 Oak Street	3	Marketing Campaign	Implement a new marketing campaign
4	Sarah	Williams	sarahwilliams@gmail.com	901-234-5678	101 Maple Street	4	Market Research	Conduct market research to understa
5	David	Brown	davidbrown@gmail.com	545-545-1216	234 Pine Street	5	White Paper	Write a white paper to educate custo
6	Emily	Green	emilygreen@gmail.com	567-890-1234	345 Elm Street	6	Training Program	Create a new training program to tra

```

SELECT
Task.*, Project.*, Employee.*
FROM Task
INNER JOIN Project
ON Task.ProjectID = Project.ProjectID
INNER JOIN Employee
ON Task.EmployeeID = Employee.EmployeeID;

```

TaskID	Description	StartDate	EndDate	ProjectID	EmployeeID	ProjectID	Title	Description
1	Develop the user interface.	2023-01-01	2023-03-01	1	1	1	Inventory Management System	Develop a new software application to ma
2	Developing backend.	2023-02-01	2023-04-01	1	2	1	Inventory Management System	Develop a new software application to ma
3	Implement the user stories.	2023-03-01	2023-09-01	1	3	1	Inventory Management System	Develop a new software application to ma
4	Write the unit tests.	2023-04-01	2023-06-01	1	4	1	Inventory Management System	Develop a new software application to ma
5	Integrate the modules.	2023-05-01	2019-02-03	1	5	1	Inventory Management System	Develop a new software application to ma
6	Deploy the application.	2023-06-01	2023-08-01	1	6	1	Inventory Management System	Develop a new software application to ma

```

SELECT
Client.*, Project.*
FROM Client
LEFT JOIN Project
ON Client.ClientID = Project.ClientID;

```

ClientID	FirstName	LastName	Email	Phone	Address	ProjectID	Title	Description
1	James	Doe	johndoe@gmail.com	123-456-7890	123 Main Street	1	Inventory Management System	Develop a new software application t
2	Jane	Smith	janesmith@gmail.com	555-667-8901	781 Oak Street	2	Website Development	Only Build a new website to promote
3	Michael	Jones	michaeljones@gmail.com	555-555-1314	789 Oak Street	3	Marketing Campaign	Implement a new marketing campaign
4	Sarah	Williams	sarahwilliams@gmail.com	901-234-5678	101 Maple Street	4	Market Research	Conduct market research to understa
5	David	Brown	davidbrown@gmail.com	545-545-1216	234 Pine Street	5	White Paper	Write a white paper to educate custo
6	Emily	Green	emilygreen@gmail.com	567-890-1234	345 Elm Street	6	Training Program	Create a new training program to tra

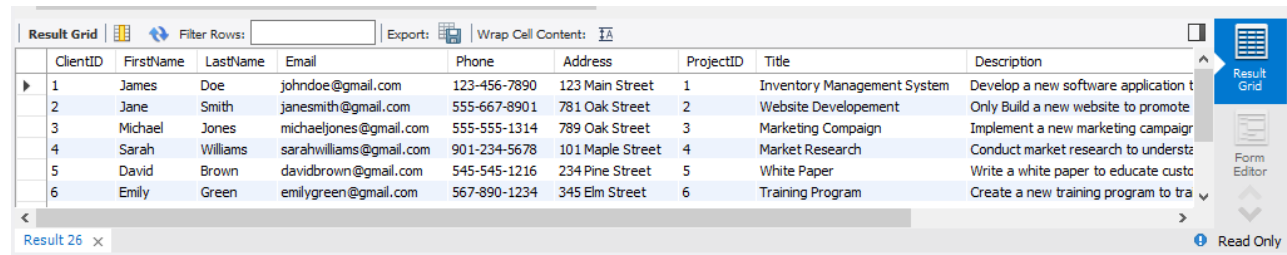
SELECT

Client.*, Project.*

FROM Client

RIGHT JOIN Project

ON Client.ClientID = Project.ClientID;



ClientID	FirstName	LastName	Email	Phone	Address	ProjectID	Title	Description
1	James	Doe	john DOE@gmail.com	123-456-7890	123 Main Street	1	Inventory Management System	Develop a new software application t
2	Jane	Smith	janesmith@gmail.com	555-667-8901	781 Oak Street	2	Website Development	Only Build a new website to promote
3	Michael	Jones	michaeljones@gmail.com	555-555-1314	789 Oak Street	3	Marketing Campaign	Implement a new marketing campaign
4	Sarah	Williams	sarahwilliams@gmail.com	901-234-5678	101 Maple Street	4	Market Research	Conduct market research to underst
5	David	Brown	davidbrown@gmail.com	545-545-1216	234 Pine Street	5	White Paper	Write a white paper to educate cust
6	Emily	Green	emilygreen@gmail.com	567-890-1234	345 Elm Street	6	Training Program	Create a new training program to tra

#-----% CASES %

SELECT

Title,

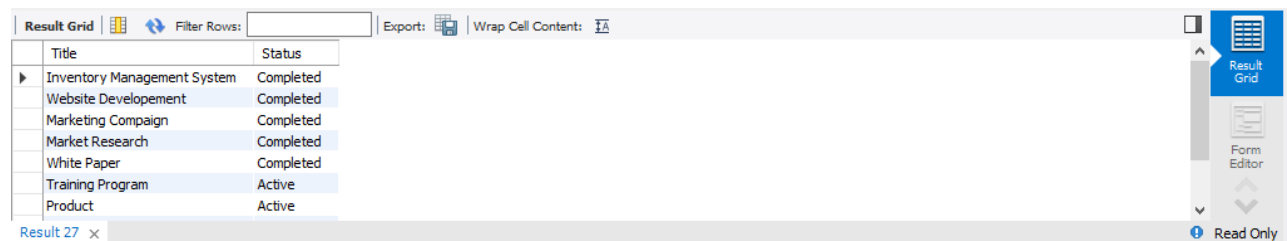
CASE

WHEN EndDate > CURDATE() **THEN** 'Active'

ELSE 'Completed'

END AS Status

FROM Project;



Title	Status
Inventory Management System	Completed
Website Development	Completed
Marketing Campaign	Completed
Market Research	Completed
White Paper	Completed
Training Program	Active
Product	Active

SELECT

CONCAT(FirstName, ' ', LastName) AS FullName,

CASE

WHEN Phone <> " **THEN** 'Individual'

WHEN Email <> " **THEN** 'Company'

ELSE 'Unknown'

END AS Category

FROM Client;

Result Grid	Filter Rows:	Export:	Wrap Cell Content:
FullName	Category		
James Doe	Individual		
Jane Smith	Individual		
Michael Jones	Individual		
Sarah Williams	Individual		
David Brown	Individual		
Emily Green	Individual		
Jack White	Individual		

Result 28 x

Read Only

```

SELECT
  Description,
  CASE
    WHEN DATEDIFF( EndDate, CURDATE()) <= 3 THEN 'Urgent'
    ELSE 'Normal'
  END AS Priority
FROM Task;

```

Result Grid	Filter Rows:	Export:	Wrap Cell Content:
Description	Priority		
Develop the user interface.	Urgent		
Developing backend.	Urgent		
Implement the user stories.	Normal		
Write the unit tests.	Urgent		
Integrate the modules.	Urgent		
Deploy the application.	Normal		
Testing	Normal		

Result 29 x

Read Only

```

SELECT
  CONCAT(FirstName, ' ', LastName) AS FullName,
  CASE
    WHEN YEAR(HireDate) < 2020 THEN 'Senior'
    ELSE 'Junior'
  END AS ExperienceLevel
FROM Employee;

```

Result Grid	Filter Rows:	Export:	Wrap Cell Content:
FullName	ExperienceLevel		
John Doe	Junior		
Jane Doe	Junior		
Bob Smith	Senior		
Sue David	Junior		
Mike Brown	Senior		
Mary Jones	Senior		
Tom Wilson	Junior		

Result 30 x

Read Only

```

SELECT
  Title,
  CASE
    WHEN (
  SELECT COUNT(*)

```

```

FROM Task
WHERE Task.ProjectID = Project.ProjectID) > 5 THEN 'High'
      ELSE 'Low'
END AS TaskComplexity
FROM Project;

```

The screenshot shows a 'Result Grid' window with a table containing the following data:

Title	TaskComplexity
Inventory Management System	High
Website Development	Low
Marketing Campaign	Low
Market Research	Low
White Paper	Low
Training Program	Low
Product	Low

The interface includes a 'Filter Rows' field, an 'Export' button, and a 'Wrap Cell Content' checkbox. The window title is 'Result 31'.

#-----% VIEWS %

```

CREATE VIEW ActiveContracts AS
SELECT
c.ContractID,
c.StartDate,
c.EndDate,
cl.FirstName AS ClientFirstName,
cl.LastName AS ClientLastName,
e.FirstName AS EmployeeFirstName,
e.LastName AS EmployeeLastName
FROM Contract c
JOIN Client cl
ON c.ClientID = cl.ClientID
JOIN Employee e
ON c.EmployeeID = e.EmployeeID
WHERE c.EndDate > CURDATE();
SELECT * FROM ActiveContracts;

```

The screenshot shows a 'Result Grid' window with a table containing the following data:

ContractID	StartDate	EndDate	ClientFirstName	ClientLastName	EmployeeFirstName	EmployeeLastName
6	2023-06-01	2023-08-01	Emily	Green	Mary	Jones
7	2023-07-01	2023-09-01	Jack	White	Tom	Wilson
8	2023-08-01	2023-10-01	Susan	Black	Lisa	Davis
9	2023-09-01	2023-11-01	Thomas	Gray	Bill	Miller
10	2023-10-01	2023-12-01	Nancy	Pink	Karen	Taylor

The interface includes a 'Filter Rows' field, an 'Export' button, and a 'Wrap Cell Content' checkbox. The window title is 'ActiveContracts 32'.

```

CREATE VIEW ProjectDetails AS
SELECT
ProjectID, Title, StartDate, EndDate

```

FROM Project;
SELECT * FROM ProjectDetails;

ProjectID	Title	StartDate	EndDate
1	Inventory Management System	2023-01-01	2023-03-01
2	Website Development	2023-02-01	2023-04-01
3	Marketing Campaign	2023-06-01	2023-05-01
4	Market Research	2023-04-01	2023-06-01
5	White Paper	2023-05-01	2023-07-01
6	Training Program	2023-06-01	2023-08-01
7	Product	2023-07-01	2023-09-01

CREATE VIEW EmployeeTasks **AS**
SELECT e.EmployeeID, e.FirstName, e.LastName, e.Email, e.Phone,
e.Address,t.TaskID,t.Description, t.StartDate, t.EndDate
FROM Employee **AS** e
JOIN Task **AS** t
ON e.EmployeeID = t.EmployeeID;
SELECT * FROM EmployeeTasks;

EmployeeID	FirstName	LastName	Email	Phone	Address	TaskID	Description	StartDate	EndDate
1	John	Doe	johndoe@example.com	555-555-1212	21 Oslo St	1	Develop the user interface.	2023-01-01	2023-03-01
2	Jane	Doe	janedoe@example.com	555-555-1212	23 Greenfield Rd	2	Developing backend.	2023-02-01	2023-04-01
3	Bob	Smith	bobsmith@example.com	janedoe@example.com	1n St	3	Implement the user stories.	2023-03-01	2023-09-01
4	Sue	David	suejohnson@example.com	555-555-1212	113 Main Rd	4	Write the unit tests.	2023-04-01	2023-06-01
5	Mike	Brown	mikebrown@example.com	555-555-1212	21 Main Victoria Rd	5	Integrate the modules.	2023-05-01	2019-02-03
6	Mary	Jones	maryjones@example.com	555-555-1212	87 Victoria St	6	Deploy the application.	2023-06-01	2023-08-01
7	Tom	Wilson	tomwilson@example.com	555-555-1212	122 Main Rd	7	Testing	2023-07-01	2023-09-01

CREATE VIEW PaymentDetails **AS**
SELECT
PaymentID, Amount, PaymentDate
FROM Payment;
SELECT * FROM PaymentDetails;

PaymentID	Amount	PaymentDate
1	2000	2022-08-01
2	2000	2022-08-01
3	3000	2022-08-01
4	4000	2022-08-01
5	5000	2022-08-01
6	6000	2022-08-01
7	7000	2022-08-01

```

CREATE VIEW ContractTerms AS
SELECT ContractID, StartDate, EndDate, TermsAndConditions
FROM Contract;
SELECT * FROM ContractTerms;

```

ContractID	StartDate	EndDate	TermsAndConditions
1	2023-01-01	2023-03-01	This is the new contract terms and conditions fo...
2	2023-02-01	2023-04-01	This is the contract terms and conditions for We...
3	2023-03-01	2023-03-01	This is the contract terms and conditions for Ma...
4	2023-04-01	2023-06-01	This is the contract terms and conditions for Ma...
5	2023-05-01	2023-07-01	This is the contract terms and conditions for Wh...
6	2023-06-01	2023-08-01	This is the contract terms and conditions for Tra...
7	2023-07-01	2023-09-01	This is the contract terms and conditions for Pro...

#-----% PROCEDURES %

```

DELIMITER //
CREATE PROCEDURE InsertClient (
    IN clientID INT,
    IN firstName VARCHAR(255),
    IN lastName VARCHAR(255),
    IN email VARCHAR(255),
    IN phone VARCHAR(255),
    IN address VARCHAR(255)
)
BEGIN
    INSERT INTO Client (ClientID, FirstName, LastName, Email, Phone, Address)
    VALUES (clientID, firstName, lastName, email, phone, address);
END //
DELIMITER ;
CALL InsertClient(12, 'John', 'Doe', 'johndoe@example.com', '1234567890', '123
Main St');
SELECT * FROM CLIENT;

```

ClientID	FirstName	LastName	Email	Phone	Address
6	Emily	Green	emilygreen@gmail.com	567-890-1234	345 Elm Street
7	Jack	White	peterwhite@gmail.com	890-123-4567	456 Oak Street
8	Susan	Black	susanblack@gmail.com	012-345-6789	567 Maple Street
9	Thomas	Gray	thomasgray@gmail.com	345-678-9012	789 Oak Street
10	Nancy	Pink	nancypink@gmail.com	678-901-2345	101 Maple Street
12	John	Doe	johndoe@example.com	1234567890	123 Main St

```

DELIMITER //
CREATE PROCEDURE GetEmployeeTasks (
    IN employeeID INT
)
BEGIN

```

```

SELECT TaskID, Description, StartDate, EndDate
FROM Task
WHERE EmployeeID = employeeID;
END //
DELIMITER ;

```

CALL GetEmployeeTasks(123);



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

TaskID	Description	StartDate	EndDate
1	Develop the user interface.	2023-01-01	2023-03-01
2	Developing backend.	2023-02-01	2023-04-01
3	Implement the user stories.	2023-03-01	2023-09-01
4	Write the unit tests.	2023-04-01	2023-06-01
5	Integrate the modules.	2023-05-01	2019-02-03
6	Deploy the application.	2023-06-01	2023-08-01
7	Testing	2023-07-01	2023-09-01

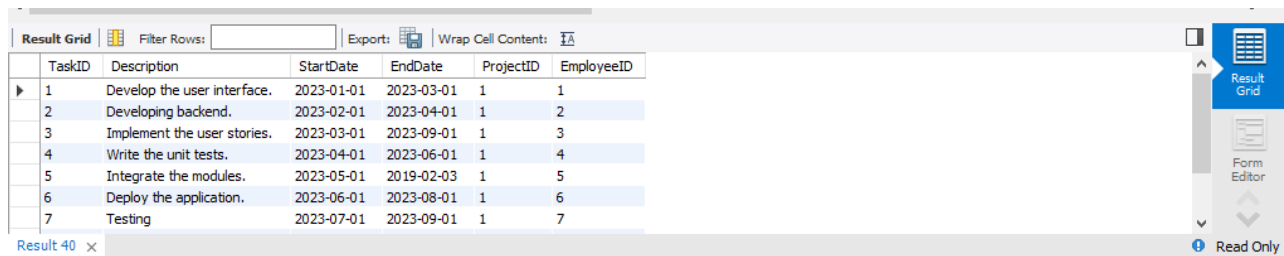
Result 39 x | Read Only

```

DELIMITER //
CREATE PROCEDURE GetTaskByID (
    IN taskID INT
)
BEGIN
    SELECT *
    FROM Task
    WHERE TaskID = taskID;
END //
DELIMITER ;

```

CALL GetTaskByID(1);



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

TaskID	Description	StartDate	EndDate	ProjectID	EmployeeID
1	Develop the user interface.	2023-01-01	2023-03-01	1	1
2	Developing backend.	2023-02-01	2023-04-01	1	2
3	Implement the user stories.	2023-03-01	2023-09-01	1	3
4	Write the unit tests.	2023-04-01	2023-06-01	1	4
5	Integrate the modules.	2023-05-01	2019-02-03	1	5
6	Deploy the application.	2023-06-01	2023-08-01	1	6
7	Testing	2023-07-01	2023-09-01	1	7

Result 40 x | Read Only

```

DELIMITER //
CREATE PROCEDURE InsertProject (
    IN projectID INT,
    IN title VARCHAR(255),
    IN description VARCHAR(255),
    IN startDate DATE,
    IN endDate DATE
)
BEGIN
    INSERT INTO Project (ProjectID, Title, Description, StartDate, EndDate)
    VALUES (projectID, title, description, startDate, endDate);

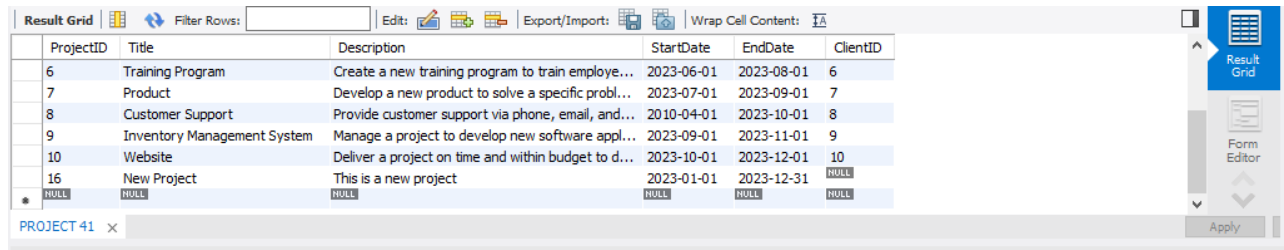
```



```

END //
DELIMITER ;
CALL InsertProject(16, 'New Project', 'This is a new project', '2023-01-01', '2023-12-31');

```



The screenshot shows a database application window with a 'Result Grid' tab. The table contains the following data:

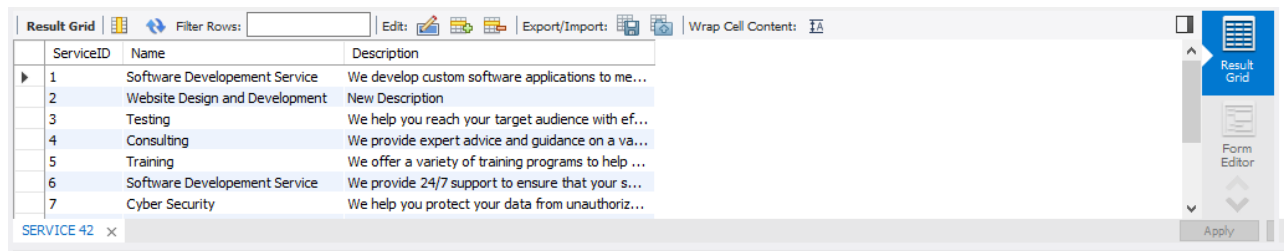
ProjectID	Title	Description	StartDate	EndDate	ClientID
6	Training Program	Create a new training program to train employee...	2023-06-01	2023-08-01	6
7	Product	Develop a new product to solve a specific probl...	2023-07-01	2023-09-01	7
8	Customer Support	Provide customer support via phone, email, and...	2010-04-01	2023-10-01	8
9	Inventory Management System	Manage a project to develop new software appl...	2023-09-01	2023-11-01	9
10	Website	Deliver a project on time and within budget to d...	2023-10-01	2023-12-01	10
16	New Project	This is a new project	2023-01-01	2023-12-31	NULL
NULL	NULL	NULL	NULL	NULL	NULL

```

DELIMITER //
CREATE PROCEDURE InsertService (
    IN name VARCHAR(255),
    IN description VARCHAR(255)
)
BEGIN
    INSERT INTO Service (Name, Description)
    VALUES (name, description);
END //
DELIMITER ;

```

CALL InsertService('Web Development', 'Creating and maintaining websites');



The screenshot shows a database application window with a 'Result Grid' tab. The table contains the following data:

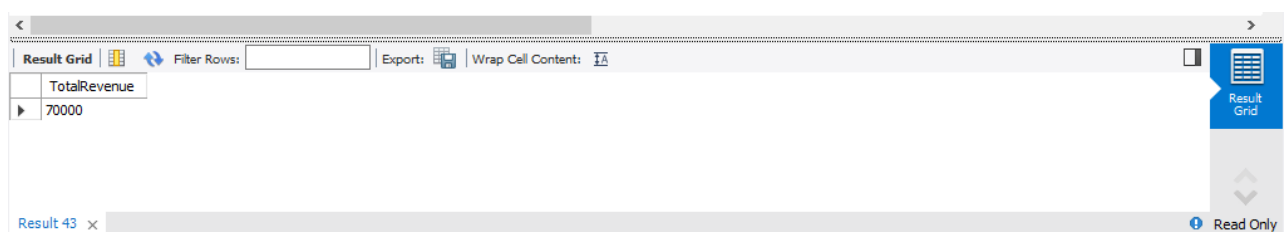
ServiceID	Name	Description
1	Software Development Service	We develop custom software applications to me...
2	Website Design and Development	New Description
3	Testing	We help you reach your target audience with ef...
4	Consulting	We provide expert advice and guidance on a va...
5	Training	We offer a variety of training programs to help ...
6	Software Development Service	We provide 24/7 support to ensure that your s...
7	Cyber Security	We help you protect your data from unauthoriz...

#-----% AGGREGATE FUNCTIONS %

```

SELECT
SUM(Amount) AS TotalRevenue
FROM Payment ;

```



The screenshot shows a database application window with a 'Result Grid' tab. The table contains the following data:

TotalRevenue
70000

```

SELECT
AVG(DATEDIFF(EndDate, StartDate))
AS AverageTaskDuration
FROM Task;

```

Result Grid		Filter Rows:	Export:	Wrap Cell Content:
AverageTaskDuration				
-81.8000				

Result 44 x

Read Only

```

SELECT
MIN(StartDate) AS MinProjectStartDate
FROM Project;

```

Result Grid		Filter Rows:	Export:	Wrap Cell Content:
MinProjectStartDate				
2010-04-01				

Result 45 x

Read Only

```

SELECT
COUNT(*) AS ActiveContracts
FROM Contract
WHERE EndDate > CURDATE();

```

Result Grid		Filter Rows:	Export:	Wrap Cell Content:
ActiveContracts				
5				

Result 46 x

Read Only

```

SELECT
YEAR(StartDate) AS Year,
COUNT(*) AS TotalProjects
FROM Project
GROUP BY YEAR(StartDate);

```

Result Grid		Filter Rows:	Export:	Wrap Cell Content:
Year	TotalProjects			
2023	10			
2010	1			

Result 48 x

Read Only

#-----% SUB QUERIES %

```
SELECT ClientID, FirstName, LastName
FROM Client
WHERE ClientID IN (
    SELECT DISTINCT ClientID
    FROM Project
);
```

ClientID	FirstName	LastName
1	James	Doe
2	Jane	Smith
3	Michael	Jones
4	Sarah	Williams
5	David	Brown

```
SELECT p.ProjectID, p.Title, (
    SELECT
    AVG(e.Salary)
    FROM Employee AS e
    WHERE e.EmployeeID = t.EmployeeID
) AS AverageSalary
FROM Project AS p
INNER JOIN Task AS t
ON p.ProjectID = t.ProjectID;
```

ProjectID	Title	AverageSalary
1	Inventory Management System	52000.0000
1	Inventory Management System	200500.0000
1	Inventory Management System	100000.0000
1	Inventory Management System	60000.0000
1	Inventory Management System	90000.0000

```
SELECT s.ServiceID, s.Name, s.Description
FROM Service AS s
WHERE NOT EXISTS (
    SELECT * FROM Contract AS c
    WHERE c.ServiceID = s.ServiceID
);
```

ServiceID	Name	Description
11	Web Development	Creating and maintaining websites
NULL	NULL	NULL

```
SELECT c.ContractID, c.StartDate, c.EndDate, (
```

```

SELECT SUM(p.Amount)
FROM Payment AS p
WHERE p.ContractID = c.ContractID
) AS TotalAmountPaid
FROM Contract AS c;

```

ContractID	StartDate	EndDate	TotalAmountPaid
1	2023-01-01	2023-03-01	2000
2	2023-02-01	2023-04-01	2000
3	2023-03-01	2023-03-01	3000
4	2023-04-01	2023-06-01	4000
5	2023-05-01	2023-07-01	5000

```

SELECT e.FirstName, e.LastName
FROM Employee AS e
WHERE (
    SELECT COUNT(DISTINCT t.ProjectID)
FROM Task AS t
WHERE t.EmployeeID = e.EmployeeID
) > 1;

```

FirstName	LastName
-----------	----------

```

SELECT *
FROM Project
WHERE ProjectID IN (
    SELECT ContractID
FROM Payment
WHERE Amount > 5000
);

```

ProjectID	Title	Description	StartDate	EndDate	ClientID
6	Training Program	Create a new training program to train employee...	2023-06-01	2023-08-01	6
7	Product	Develop a new product to solve a specific probl...	2023-07-01	2023-09-01	7
8	Customer Support	Provide customer support via phone, email, and...	2010-04-01	2023-10-01	8
9	Inventory Management System	Manage a project to develop new software appl...	2023-09-01	2023-11-01	9
10	Website	Deliver a project on time and within budget to d...	2023-10-01	2023-12-01	10
NULL	NULL	NULL	NULL	NULL	NULL



<https://github.com/taahahussainkhan/Structured-Query-Language/tree/main/Software-House-Schema>