Phase II - Clinic Registration

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Part A: Relational Schema

Mandatory DB system (may change depending on application):
logintable

loginid	username	email	pass

```
CREATE TABLE `logintable` (
  `loginid` int NOT NULL AUTO_INCREMENT,
  `username` varchar(45) DEFAULT NULL,
  `email` varchar(45) DEFAULT NULL,
  `pass` varchar(45) DEFAULT NULL,
  PRIMARY KEY (`loginid`),
  UNIQUE KEY `loginid_UNIQUE` (`loginid`),
  UNIQUE KEY `email_UNIQUE` (`email`)
) ENGINE=InnoDB DEFAULT CHARSET=utf8mb4 COLLATE=utf8mb4_0900_ai_ci;
```

patientreg

patientid	firstname	lastname	phonenumber	age	gender	dayOfBirth	username	email	pass	address

```
CREATE TABLE `patientreg` (
  `patientid` int NOT NULL AUTO_INCREMENT,
  `firstname` varchar(40) DEFAULT NULL,
  `lastname` varchar(45) DEFAULT NULL,
  `phonenumber` varchar(45) DEFAULT NULL,
  `age` varchar(45) DEFAULT NULL,
  `gender` varchar(45) DEFAULT NULL,
  `dayOfBirth` varchar(45) DEFAULT NULL,
  `username` varchar(45) DEFAULT NULL,
  `email` varchar(45) DEFAULT NULL,
  `pass` varchar(45) DEFAULT NULL,
  `address` varchar(45) DEFAULT NULL,
  PRIMARY KEY (`patientid`),
  UNIQUE KEY `patientid_UNIQUE` (`patientid`),
  UNIQUE KEY `email_UNIQUE` (`email`)
) ENGINE=InnoDB DEFAULT CHARSET=utf8mb4 COLLATE=utf8mb4_0900_ai_ci;
```

doctorreg

doctorid	docfirstname	doclastname	docphonenumber	docage	docgender	docdayOfBirth	username	email	pass	docaddress

```
CREATE TABLE `doctorreg` (
  `doctorid` int NOT NULL AUTO_INCREMENT,
  `docfirstname` varchar(45) DEFAULT NULL,
  `doclastname` varchar(45) DEFAULT NULL,
  `docphonenumber` varchar(45) DEFAULT NULL,
  `docage` varchar(45) DEFAULT NULL,
  `docgender` varchar(45) DEFAULT NULL,
  `docdayOfBirth` varchar(45) DEFAULT NULL,
  `username` varchar(45) DEFAULT NULL,
  `email` varchar(45) DEFAULT NULL,
  `pass` varchar(45) DEFAULT NULL,
  `docaddress` varchar(45) DEFAULT NULL,
  PRIMARY KEY (`doctorid`),
  UNIQUE KEY `doctorid_UNIQUE` (`doctorid`),
  UNIQUE KEY `email_UNIQUE` (`email`)
) ENGINE=InnoDB DEFAULT CHARSET=utf8mb4 COLLATE=utf8mb4_0900_ai_ci;
```

appointments

apointmentid	patientid	choosendate	time	doctorid

```
CREATE TABLE `appointments` (
  `appointmentid` int NOT NULL AUTO_INCREMENT,
  `patientid` int DEFAULT NULL,
  `choosendate` varchar(45) DEFAULT NULL,
  `time` varchar(45) DEFAULT NULL,
  `doctorid` int DEFAULT NULL,
  PRIMARY KEY (`appointmentid`),
  UNIQUE KEY `appointmentid_UNIQUE` (`appointmentid`),
  UNIQUE KEY `patientid_UNIQUE` (`patientid`),
  UNIQUE KEY `doctorid_UNIQUE` (`doctorid`)
) ENGINE=InnoDB DEFAULT CHARSET=utf8mb4 COLLATE=utf8mb4_0900_ai_ci;
```

prescription

prescriptionid	patientid	doctorid	prescriptionname	start	end

```
CREATE TABLE `prescription` (
  `prescriptionid` int NOT NULL AUTO_INCREMENT,
  `patientid` varchar(45) DEFAULT NULL,
  `doctorid` varchar(45) DEFAULT NULL,
  `prescriptionname` varchar(45) DEFAULT NULL,
  `start` varchar(45) DEFAULT NULL,
  `end` varchar(45) DEFAULT NULL,
  PRIMARY KEY (`prescriptionid`),
  UNIQUE KEY `prescriptionid_UNIQUE` (`prescriptionid`),
  UNIQUE KEY `patientid_UNIQUE` (`patientid`),
  UNIQUE KEY `doctorid_UNIQUE` (`doctorid`)
) ENGINE=InnoDB DEFAULT CHARSET=utf8mb4 COLLATE=utf8mb4_0900_ai_ci;
```

Part B: Sample Data

loginid	username	email	pass
1	yp	example@gmail.com	here
2	kk	example2@gmail.com	now
3	as	example3@gmail.com	house
4	pk	example4@gmail.com	blue
5	rv	example5@gmail.com	red
6	dm	example6@gmail.com	data
7	doc1	example7@gmail.com	abc
8	doc2	example8@gmail.com	bac
9	doc3	example9@gmail.com	pos
10	doc4	example10@gmail.com	top
11	doc5	example11@gmail.com	bright
12	doc6	example12@gmail.com	sun
NULL	NULL	NULL	NULL

Result Grid | Filter Rows: | Edit: | Export/Import: | Wrap Cell Content:

patientid	firstname	lastname	phonenumber	age	gender	dayOfBirth	username	email	pass	address
1	yash	patel	1	20	male	somedate	yp	example@gmail.com	here	address
2	kalapan	kannathsan	2	20	male	somedate2	kk	example2@gmail.com	now	address2
3	ammar	salmawy	3	20	male	somedate3	as	example3@gmail.com	house	address3
4	poojah	karunakaran	4	20	female	somedate4	pk	example4@gmail.com	blue	address4
5	raza	navqi	5	20	female	somedate5	rn	example5@gmail.com	red	address5
6	data	mangament	6	20	other	somedate6	dm	example6@gmail.com	data	address6
NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL

doctorid	docfirstname	doclastname	docphonenumber	docage	docgender	docdayOfBirth	username	email	pass	docaddres
1	docfirst	doclast	7	50	other	somedate7	doc1	example7@gmail.com	abc	address7
2	docfirst2	doclast2	8	51	other	somedate8	doc2	example8@gmail.com	bac	address8
3	docfirst3	doclast3	9	52	other	somedate9	doc3	example9@gmail.com	pos	address9
4	docfirst4	doclast4	10	53	other	somedate10	doc4	example10@gmail.com	top	address10
5	docfirst5	doclast5	11	54	other	somedate11	doc5	example11@gmail.com	bright	address11
6	docfirst6	doclast6	12	55	other	somedate12	doc6	example12@gmail.com	sun	address12
NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL

prescriptionid	patientid	doctorid	prescriptionname	start	end
1	1	1	drug	startdate	enddate
2	2	2	drug2	startdate2	enddate2
3	3	3	drug3	startdate3	enddate3
4	4	4	drug4	startdate4	enddate4
5	5	5	drug5	startdate5	enddate5
6	6	6	drug6	startdate6	enddate6
NULL	NULL	NULL	NULL	NULL	NULL

appointmentid	patientid	choosendate	time	doctorid
1	1	choosendate	time	1
2	2	choosendate2	time2	2
3	3	choosendate3	time3	3
4	4	choosendate4	time4	4
5	5	choosendate5	time5	5
6	6	choosendate6	time6	6
NULL	NULL	NULL	NULL	NULL

Part C: Views

1. JOIN of at least three tables. Shows the email of a patient with their first name and the drug they have a prescription for.

```
1  SELECT logintable.email,
2       patientreg.firstname,
3       prescription.prescriptionname
4  From patientreg
5  JOIN logintable
6      ON patientreg.username = logintable.username
7  JOIN prescription
8      ON prescription.patientid = patientreg.patientid
9
```

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

email	firstname	prescriptionname
example@gmail.com	yash	drug
example2@gmail.com	kalapan	drug2
example3@gmail.com	ammar	drug3
example4@gmail.com	poojah	drug4
example5@gmail.com	raza	drug5
example6@gmail.com	data	drug6

2. Uses nested queries with ANY and GROUP BY. Shows the different genders within the patient table and the total amount of each gender.

```
1  SELECT
2      COUNT(patientid),
3      gender
4  FROM patientreg
5  WHERE patientid = ANY (SELECT patientid FROM patientreg)
6  GROUP BY gender
7  order by COUNT(patientid)
```

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

COUNT(patientid)	gender
1	other
2	female
3	male

3. A correlated nested query. Shows the most recent user that has joined the system and their information.

```
1  SELECT
2      loginid,
3      username,
4      email,
5      pass
6  FROM logintable
7
8  WHERE loginid = (SELECT MAX(loginid) FROM logintable)
```

Result Grid | Filter Rows: | Edit: | Export/Import: | Wrap Cell Content:

loginid	username	email	pass
12	doc6	example12@gmail.com	sun
NULL	NULL	NULL	NULL

4. Uses a FULL JOIN (mysql doesn't support full join, so join left and right will be used to show that the concept works)

```
1 •  SELECT
2        patientreg.lastname,
3        logintable.loginid
4    From patientreg
5    LEFT JOIN logintable
6        ON patientreg.email=logintable.email
7    order by loginid
```

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

lastname	loginid
patel	1
kannathsan	2
salmawy	3
karunakaran	4
navqi	5
mangament	6

```
1 •  SELECT
2        patientreg.lastname,
3        logintable.loginid
4    From patientreg
5    RIGHT JOIN logintable
6        ON patientreg.email=logintable.email
7    order by loginid
```

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

lastname	loginid
patel	1
kannathsan	2
salmawy	3
karunakaran	4
navqi	5
mangament	6
NULL	7
NULL	8
NULL	9
NULL	10
NULL	11
NULL	12

5. Nested query using INTERSECT (intersect doesn't work in mysql so inner join will be used).

```
1  SELECT
2      username
3  from patientreg
4  INNER JOIN logintable USING(username)
```

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

username
yp
kk
as
pk
rn
dm

6. Total number of users (accounts created) in the system.

```
1  SELECT
2      COUNT(loginid)
3  FROM logintable
```

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

COUNT(loginid)
12

7. Total number of patients within the system.

```
1  SELECT
2      COUNT(patientid)
3  FROM patientreg
```

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

	COUNT(patientid)
▶	6

8. Total number of doctors within the system.

```
1  SELECT
2      COUNT(doctorid)
3  FROM doctorreg
```

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

	COUNT(doctorid)
▶	6

9. Total number of prescriptions within the system.

```
1 •  SELECT
2        COUNT(prescriptionid)
3    FROM prescription
```

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

	COUNT(prescriptionid)
▶	6

10. Total number of appointments within the system.

```
1 •  SELECT
2        COUNT(appointmentid)
3    FROM appointments
```

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

	COUNT(appointmentid)
▶	6

Part D: E-R Diagram