School Mangement System

Topic : Normalization

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NORMALIZATION

It's a database design principle for organizing data in a organize and consistent way

Why We Need <u>Normalization</u> in DBMS?

- Eliminating Redundancy
- Consistency
- Storage Optimization
- Logically Stored Data
- CRUD Operation

NORMALIZATION

1. First Normal Form
2. Second Normal Form
3. Third Normal Form

1NF, 2NF, 3NF

Features In School Website Project

Institute Information

Institute Details	Student	Teacher
Committee	Donor Member	Staff

Academic Information

Book List	Dress Code	Seat Info
Syllabus	Fees Info	Find Payslip

Attendance Information
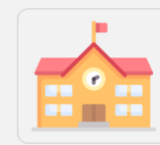
Institute Wise	Section Wise	Student Wise
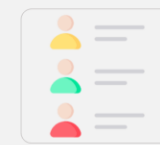
Routine Information
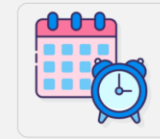
Class Routine	Exam Routine	Online Class Routine
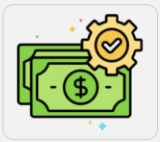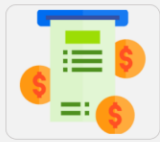
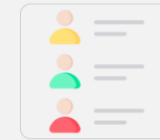## Semester Exam Information
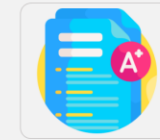
Merit List	Fail List
Section Wise	Student Wise

id	picture	student_name	gender	birth	email	phone	student_address	father_name	father_picture	father_nid	father_phone	father_email	mother_name	mother_picture	mother_nid	class
1	/eyasir_ahamed.png	Eyasir Ahamed	male	2002	eyasir329@gmail.com	01709436723	Dhaka, Dhaka, Dhanmondi, 1205	Rafiqul Islam	/rafiqul_islam.png	5268255276234	01743777283	rafiquleng1968@gmail.com	Amina Khatun	/amina_khatun.png	8291736521345	eight
2	/sarah_wilson.png	Sarah Wilson	female	2002	sarah.wilson@example.com	09876543210	Rajshahi, Pabna, Pabna Sadar, 6600	Abdul Haque	/abdul_haque.png	7325162873492	01876543210	abdul.haque@example.com	Fatima Begum	/fatima_begum.png	6459837124731	five
3	/david_miller.png	David Miller	male	2003	david.miller@example.com	01234567890	Chittagong, Comilla, Comilla Sadar...	Akbar Ali	/akbar_ali.png	9283416758923	01543210987	akbar.ali@example.com	Nasrin Jahan	/nasrin_jahan.png	1837462958374	three
4	/emily_jones.png	Emily Jones	female	2002	emily.jones@example.com	07654321098	Khulna, Satkhira, Satkhira Sadar, 9...	Shafi Ahmed	/shafi_ahmed.png	5738291462853	01987654321	shafi.ahmed@example.com	Nadia Khan	/nadia_khan.png	3481926573845	ten
5	/michael_clark.png	Michael Clark	male	2003	michael.clark@example.com	01122334455	Dhaka, Narayanganj, Rupganj, 1460	Ibrahim Rahman	/ibrahim_rahman.png	9274658319245	01654321098	ibrahim.rahman@example.com	Fahima Akhter	/fahima_akhter.png	5123789647513	two
6	/sophia_brown.png	Sophia Brown	female	2002	sophia.brown@example.com	01234567890	Khulna, Bagerhat, Bagerhat Sadar,...	Mazharul Islam	/mazharul_islam.png	8392475617324	01765432109	mazharul.islam@example.com	Sultana Begum	/sultana_begum.png	4738291562837	one
7	/daniel_davis.png	Daniel Davis	male	2003	daniel.davis@example.com	07654321098	Barisal, Bhola, Lalmohan, 8310	Nurul Alam	/nurul_alam.png	6738124956732	01876543210	nurul.alam@example.com	Sabina Binte	/sabina_binte.png	2573189462873	se...
8	/olivia_anderson.png	Olivia Anderson	female	2002	olivia.anderson@example.com	01122334455	Khulna, Jessore, Jessore Sadar, 74...	Rahim Uddin	/rahim_uddin.png	9831745628734	01543210987	rahim.uddin@example.com	Tahmina Akter	/tahmina_akter.png	1734658293475	nine
9	/ethan_white.png	Ethan White	male	2003	ethan.white@example.com	09876543210	Dhaka, Narsingdi, Narsingdi Sadar,...	Nasir Khan	/nasir_khan.png	3981726542835	01987654321	nasir.khan@example.com	Nusrat Jahan	/nusrat_jahan.png	8273465193726	five
10	/mia_taylor.png	Mia Taylor	female	2002	mia.taylor@example.com	01234567890	Barisal, Patuakhali, Patuakhali Sad...	Farid Hossain	/farid_hossain.png	2384956719345	01654321098	farid.hossain@example.com	Salma Akhter	/salma_akhter.png	8734165928731	four
11	/christopher_moore...	Christopher M...	male	2003	christopher.moore@example...	07654321098	Rajshahi, Joypurhat, Joypurhat Sad...	Rahman Ali	/rahman_ali.png	5629381475638	01765432109	rahman.ali@example.com	Faria Khatun	/faria_khatun.png	1928745631984	eight
12	/ava_lee.png	Ava Lee	female	2002	ava.lee@example.com	01122334455	Sylhet, Sylhet, Sylhet Sadar, 3100	Mosharraf Ho...	/mosharraf_hossai...	6538192745692	01876543210	mosharraf.hossain@example...	Amina Begum	/amina_begum.png	7834619528735	ten
13	/liam_smith.png	Liam Smith	male	2003	liam.smith@example.com	09876543210	Chittagong, Feni, Feni Sadar, 3900	Alamgir Khan	/alamgir_khan.png	2371845693124	01543210987	alamgir.khan@example.com	Shireen Akhter	/shireen_akhter.png	1245387691245	se...
14	/emma_harris.png	Emma Harris	female	2002	emma.harris@example.com	01234567890	Rajshahi, Pabna, Bera, 6630	Rahat Hossain	/rahat_hossain.png	5346789124781	01987654321	rahat.hossain@example.com	Nahid Islam	/nahid_islam.png	8765492317493	three
15	/alexander_wang.png	Alexander Wang	male	2003	alexander.wang@example.com	07654321098	Chittagong, Chittagong, Chandgao...	Sonia Begum	/sonia_begum.png	2391876543198	01654321098	sonia.begum@example.com	Aftab Ali	/aftab_ali.png	7834926512734	nine
16	/aria_johnson.png	Aria Johnson	female	2002	aria.johnson@example.com	01122334455	Sylhet, Moulvibazar, Kamalganj, 3204	Zarin Jahan	/zarin_jahan.png	1847659321784	01765432109	zarin.jahan@example.com	Mahbub Khan	/mahbub_khan.png	4738192561782	one
17	/matthew_roberts.png	Matthew Roberts	male	2003	matthew.roberts@example.com	09876543210	Rajshahi, Chapainawabganj, Chap...	Rozina Akter	/rozina_akter.png	9237416582934	01876543210	rozina.akter@example.com	Sakib Ahmed	/sakib_ahmed.png	2374896512394	two
18	/amelia_davis.png	Amelia Davis	female	2002	amelia.davis@example.com	01234567890	Barisal, Bhola, Bhola Sadar, 8300	Maliha Jahan	/maliha_jahan.png	1928345673124	01543210987	maliha.jahan@example.com	Mamun Hoss...	/mamun_hossain...	5346729138492	six
19	/benjamin_wilson.png	Benjamin Wilson	male	2003	benjamin.wilson@example.com	07654321098	Dhaka, Gazipur, Sreepur, 1700	Rehana Begum	/rehana_begum.png	9837165231789	01987654321	rehana.begum@example.com	Arif Ali	/arif_ali.png	3748561298732	two
20	/chloe_moore.png	Chloe Moore	female	2002	chloe.moore@example.com	01122334455	Dhaka, Tangail, Tangail Sadar, 1900	Sabrina Khatun	/sabrina_khatun.png	2193486751329	01654321098	sabrina.khatun@example.com	Rafiq Ahmed	/rafiq_ahmed.png	7348916527394	five

1NF

- Single cell not hold more than one value. ✗
- There must be primary key. ✓
- Each record is unique ✓

STUDENT SECTION

id	picture	student_name	gender	birth	email	phone	address_id	father_name	father_picture	father_nid	father_phone	father_email	mother_name	mother_picture	mother_nid	class
1	/eyasir_ahamed.png	Eyasir Ahamed	male	2002	eyasir329@gmail.com	01709436723	1	Rafiqul Islam	/rafiqul_islam.png	5268255276234	01743777283	rafiquleng1968@gmail.com	Amina Khatun	/amina_khatun.png	8291736521345	eight
2	/sarah_wilson.png	Sarah Wilson	female	2002	sarah.wilson@example.com	09876543210	15	Abdul Haque	/abdul_haque.png	7325162873492	01876543210	abdul.haque@example.com	Fatima Begum	/fatima_begum.png	6459837124731	five
3	/david_miller.png	David Miller	male	2003	david.miller@example.com	01234567890	8	Akbar Ali	/akbar_ali.png	9283416758923	01543210987	akbar.ali@example.com	Nasrin Jahan	/nasrin_jahan.png	183762958374	three
4	/emily_jones.png	Emily Jones	female	2002	emily.jones@example.com	07654321098	22	Shafi Ahmed	/shafi_ahmed.png	5738291462853	01987654321	shafi.ahmed@example.com	Nadia Khan	/nadia_khan.png	3481926573845	ten
5	/michael_clark.png	Michael Clark	male	2003	michael.clark@example.com	01122334455	31	Ibrahim Rahman	/ibrahim_rahman.png	9274658319245	01654321098	ibrahim.rahman@example.com	Fahima Akhter	/fahima_akhter.png	5123789647513	two
6	/sophia_brown.png	Sophia Brown	female	2002	sophia.brown@example.com	01234567890	16	Mazharul Islam	/mazharul_islam.png	8392475617324	01765432109	mazharul.islam@example.com	Sultana Begum	/sultana_begum.png	4738291562837	one
7	/daniel_davis.png	Daniel Davis	male	2003	daniel.davis@example.com	07654321098	30	Nurul Alam	/nurul_alam.png	6738124956732	01876543210	nurul.alam@example.com	Sabina Binte	/sabina_binte.png	2573189462873	se…
8	/olivia_anderson.png	Olivia Anderson	female	2002	olivia.anderson@example.com	01122334455	10	Rahim Uddin	/rahim_uddin.png	9831745628734	01543210987	rahim.uddin@example.com	Tahmina Akter	/tahmina_akter.png	1734658293475	nine
9	/ethan_white.png	Ethan White	male	2003	ethan.white@example.com	09876543210	25	Nasir Khan	/nasir_khan.png	3981726542835	01987654321	nasir.khan@example.com	Nusrat Jahan	/nusrat_jahan.png	8273465193726	five
10	/mia_taylor.png	Mia Taylor	female	2002	mia.taylor@example.com	01234567890	18	Farid Hossain	/farid_hossain.png	2384956719345	01654321098	farid.hossain@example.com	Salma Akhter	/salma_akhter.png	8734165928731	four
11	/christopher_moore…	Christopher M…	male	2003	christopher.moore@example.…	07654321098	27	Rahman Ali	/rahman_ali.png	5629381475638	01765432109	rahman.ali@example.com	Faria Khatun	/faria_khatun.png	1928745631984	eight
12	/ava_lee.png	Ava Lee	female	2002	ava.lee@example.com	01122334455	5	Mosharraf Ho…	/mosharraf_hossai…	6538192745692	01876543210	mosharraf.hossain@example…	Amina Begum	/amina_begum.png	7834619528735	ten
13	/liam_smith.png	Liam Smith	male	2003	liam.smith@example.com	09876543210	14	Alamgir Khan	/alamgir_khan.png	2371845693124	01543210987	alamgir.khan@example.com	Shireen Akhter	/shireen_akhter.png	1245387691245	se…
14	/emma_harris.png	Emma Harris	female	2002	emma.harris@example.com	01234567890	33	Rahat Hossain	/rahat_hossain.png	5346789124781	01987654321	rahat.hossain@example.com	Nahid Islam	/nahid_islam.png	8765492317493	three
15	/alexander_wang.png	Alexander Wang	male	2003	alexander.wang@example.com	07654321098	2	Sonia Begum	/sonia_begum.png	2391876543198	01654321098	sonia.begum@example.com	Aftab Ali	/aftab_ali.png	7834926512734	nine
16	/aria_johnson.png	Aria Johnson	female	2002	aria.johnson@example.com	01122334455	29	Zarin Jahan	/zarin_jahan.png	1847659321784	01765432109	zarin.jahan@example.com	Mahbub Khan	/mahbub_khan.png	4738192561782	one
17	/matthew_roberts.png	Matthew Roberts	male	2003	matthew.roberts@example.com	09876543210	21	Rozina Akter	/rozina_akter.png	9237416582934	01876543210	rozina.akter@example.com	Sakib Ahmed	/sakib_ahmed.png	2374896512394	two
18	/amelia_davis.png	Amelia Davis	female	2002	amelia.davis@example.com	01234567890	12	Maliha Jahan	/maliha_jahan.png	1928345673124	01543210987	maliha.jahan@example.com	Mamun Hoss…	/mamun_hossain…	5346729138492	six
19	/benjamin_wilson.png	Benjamin Wilson	male	2003	benjamin.wilson@example.com	07654321098	7	Rehana Begum	/rehana_begum.png	9837416523189	01987654321	rehana.begum@example.com	Arif Ali	/arif_ali.png	3748561298732	two
20	/chloe_moore.png	Chloe Moore	female	2002	chloe.moore@example.com	01122334455	19	Sabrina Khatun	/sabrina_khatun.png	2193486751329	01654321098	sabrina.khatun@example.com	Rafiq Ahmed	/rafiq_ahmed.png	7348916527394	five

Now it's done for 1NF
But we have so many
redundancy value.

address_id	division	district	upazilla	postal_code
1	Dhaka	Dhaka	Dhanmondi	1205
15	Rajshahi	Pabna	Pabna Sadar	6600
8	Chittagong	Comilla	Comilla Sadar	3500
22	Khulna	Satkhira	Satkhira Sadar	9400
31	Dhaka	Narayanganj	Rupganj	1460
16	Khulna	Bagerhat	Bagerhat Sadar	9300
30	Barisal	Bhola	Lalmohan	8310
10	Khulna	Jessore	Jessore Sadar	7400
25	Dhaka	Narsingdi	Narsingdi Sadar	1600
18	Barisal	Patuakhali	Patuakhali Sadar	8600
27	Rajshahi	Joypurhat	Joypurhat Sadar	5900
5	Sylhet	Sylhet	Sylhet Sadar	3100
14	Chittagong	Feni	Feni Sadar	3900
33	Rajshahi	Pabna	Bera	6630
2	Chittagong	Chittagong	Chandgaon	4000
29	Sylhet	Moulvibazar	Kamalganj	3204
21	Rajshahi	Chapaina…	Chapainawabg…	6300
12	Barisal	Bhola	Bhola Sadar	8300
7	Dhaka	Gazipur	Sreepur	1700
19	Dhaka	Tangail	Tangail Sadar	1900

id	picture	student_name	gender	birth	email	phone	address_id	father_name	father_picture	father_nid	father_phone	father_email	mother_name	mother_picture	mother_nid	class
1	/eyasir_ahamed.png	Eyasir Ahamed	male	2002	eyasir329@gmail.com	01709436723	1	Rafiqul Islam	/rafiqul_islam.png	5268255276234	01743777283	rafiquleng1968@gmail.com	Amina Khatun	/amina_khatun.png	8291736521345	eight
2	/sarah_wilson.png	Sarah Wilson	female	2002	sarah.wilson@example.com	09876543210	15	Abdul Haque	/abdul_haque.png	7325162873492	01876543210	abdul.haque@example.com	Fatima Begum	/fatima_begum.png	6459837124731	five
3	/david_miller.png	David Miller	male	2003	david.miller@example.com	01234567890	8	Akbar Ali	/akbar_ali.png	9283416758923	01543210987	akbar.ali@example.com	Nasrin Jahan	/nasrin_jahan.png	1837462958374	three
4	/emily_jones.png	Emily Jones	female	2002	emily.jones@example.com	07654321098	22	Shafi Ahmed	/shafi_ahmed.png	5738291462853	01987654321	shafi.ahmed@example.com	Nadia Khan	/nadia_khan.png	3481926573845	ten
5	/michael_clark.png	Michael Clark	male	2003	michael.clark@example.com	01122334455	31	Ibrahim Rahman	/ibrahim_rahman.png	9274658319245	01654321098	ibrahim.rahman@example.com	Fahima Akhter	/fahima_akhter.png	5123789647513	two
6	/sophia_brown.png	Sophia Brown	female	2002	sophia.brown@example.com	01234567890	16	Mazharul Islam	/mazharul_islam.png	8392475617324	01765432109	mazharul.islam@example.com	Sultana Begum	/sultana_begum.png	4738291562837	one
7	/daniel_davis.png	Daniel Davis	male	2003	daniel.davis@example.com	07654321098	30	Nurul Alam	/nurul_alam.png	6738124956732	01876543210	nurul.alam@example.com	Sabina Binte	/sabina_binte.png	2573189462873	se...
8	/olivia_anderson.png	Olivia Anderson	female	2002	olivia.anderson@example.com	01122334455	10	Rahim Uddin	/rahim_uddin.png	9831745628734	01543210987	rahim.uddin@example.com	Tahmina Akter	/tahmina_akter.png	1734658293475	nine
9	/ethan_white.png	Ethan White	male	2003	ethan.white@example.com	09876543210	25	Nasir Khan	/nasir_khan.png	3981726542835	01987654321	nasir.khan@example.com	Nusrat Jahan	/nusrat_jahan.png	8273465193726	five
10	/mia_taylor.png	Mia Taylor	female	2002	mia.taylor@example.com	01234567890	18	Farid Hossain	/farid_hossain.png	2384956719345	01654321098	farid.hossain@example.com	Salma Akhter	/salma_akhter.png	8734165928731	four
11	/christopher_moore...	Christopher M...	male	2003	christopher.moore@example...	07654321098	27	Rahman Ali	/rahman_ali.png	5629381475638	01765432109	rahman.ali@example.com	Faria Khatun	/faria_khatun.png	1928745631984	eight
12	/ava_lee.png	Ava Lee	female	2002	ava.lee@example.com	01122334455	5	Mosharraf Ho...	/mosharraf_hossai...	6538192745692	01876543210	mosharraf.hossain@example...	Amina Begum	/amina_begum.png	7834619528735	ten
13	/liam_smith.png	Liam Smith	male	2003	liam.smith@example.com	09876543210	14	Alamgir Khan	/alamgir_khan.png	2371845693124	01543210987	alamgir.khan@example.com	Shireen Akhter	/shireen_akhter.png	1245387691245	se...
14	/emma_harris.png	Emma Harris	female	2002	emma.harris@example.com	01234567890	33	Rahat Hossain	/rahat_hossain.png	5346789124781	01987654321	rahat.hossain@example.com	Nahid Islam	/nahid_islam.png	8765492317493	three
15	/alexander_wang.png	Alexander Wang	male	2003	alexander.wang@example.com	07654321098	2	Sonia Begum	/sonia_begum.png	2391876543198	01654321098	sonia.begum@example.com	Aftab Ali	/aftab_ali.png	7834926512734	nine
16	/aria_johnson.png	Aria Johnson	female	2002	aria.johnson@example.com	01122334455	29	Zarin Jahan	/zarin_jahan.png	1847659321784	01765432109	zarin.jahan@example.com	Mahbub Khan	/mahbub_khan.png	4738192561782	one
17	/matthew_roberts.png	Matthew Roberts	male	2003	matthew.roberts@example.com	09876543210	21	Rozina Akter	/rozina_akter.png	9237416582934	01876543210	rozina.akter@example.com	Sakib Ahmed	/sakib_ahmed.png	2374896512394	two
18	/amelia_davis.png	Amelia Davis	female	2002	amelia.davis@example.com	01234567890	12	Maliha Jahan	/maliha_jahan.png	1928345673124	01543210987	maliha.jahan@example.com	Mamun Hoss...	/mamun_hossain...	5346729138492	six
19	/benjamin_wilson.png	Benjamin Wilson	male	2003	benjamin.wilson@example.com	07654321098	7	Rehana Begum	/rehana_begum.png	9837416523189	01987654321	rehana.begum@example.com	Arif Ali	/arif_ali.png	3748561298732	two
20	/chloe_moore.png	Chloe Moore	female	2002	chloe.moore@example.com	01122334455	19	Sabrina Khatun	/sabrina_khatun.png	2193486751329	01654321098	sabrina.khatun@example.com	Rafiq Ahmed	/rafiq_ahmed.png	7348916527394	five

All element from our table not following one primary key.

2NF

1NF eliminates repeating group not redundancy.

- Must be in 1NF.
- No partial dependancy.

(Means no key attributes are fully dependent on a primary key.)

student_id	first_name	last_name	gender	date_of_birth	image_src	phone	email	address_id
1	Eyasir	Ahamed	male	2002-12-02 00:00:00	/eyasir_ahamed	01709436723	eyasir329@gmail.com	1
2	Sarah	Wilson	female	2002-06-14 00:00:00	/sarah_wilson	09876543210	sarah.wilson@example.com	15
3	David	Miller	male	2003-02-28 00:00:00	/david_miller	01234567890	david.miller@example.com	8
4	Emily	Jones	female	2002-10-07 00:00:00	/emily_jones	07654321098	emily.jones@example.com	22
5	Michael	Clark	male	2003-07-19 00:00:00	/michael_clark	01122334455	michael.clark@example.com	31
6	Sophia	Brown	female	2002-04-26 00:00:00	/sophia_brown	01234567890	sophia.brown@example.com	16
7	Daniel	Davis	male	2003-11-03 00:00:00	/daniel_davis	07654321098	daniel.davis@example.com	30
8	Olivia	Anderson	female	2002-09-12 00:00:00	/olivia_anderson	01122334455	olivia.anderson@example.com	10
9	Ethan	White	male	2003-01-15 00:00:00	/ethan_white	09876543210	ethan.white@example.com	25
10	Mia	Taylor	female	2002-05-20 00:00:00	/mia_taylor	01234567890	mia.taylor@example.com	18
11	Christop...	Moore	male	2003-08-09 00:00:00	/christopher_...	07654321098	christopher.moore@example....	27
12	Ava	Lee	female	2002-12-24 00:00:00	/ava_lee	01122334455	ava.lee@example.com	5
13	Liam	Smith	male	2003-03-31 00:00:00	/liam_smith	09876543210	liam.smith@example.com	14
14	Emma	Harris	female	2002-07-05 00:00:00	/emma_harris	01234567890	emma.harris@example.com	33
15	Alexander	Wang	male	2003-01-28 00:00:00	/alexander_w...	07654321098	alexander.wang@example.com	2
16	Aria	Johnson	female	2002-10-13 00:00:00	/aria_johnson	01122334455	aria.johnson@example.com	29
17	Matthew	Roberts	male	2003-05-18 00:00:00	/matthew_rob...	09876543210	matthew.roberts@example.com	21
18	Amelia	Davis	female	2002-08-02 00:00:00	/amelia_davis	01234567890	amelia.davis@example.com	12
19	Benjamin	Wilson	male	2003-02-09 00:00:00	/benjamin_wil...	07654321098	benjamin.wilson@example.com	7
20	Chloe	Moore	female	2002-11-16 00:00:00	/chloe_moore	01122334455	chloe.moore@example.com	19

Now we are done using
1NF and 2NF

student_id	parent_id	relation
1	1	father
1	2	mother
2	3	father
2	4	mother
3	5	father
3	6	mother
4	7	father
4	8	mother
5	9	father
5	10	mother
6	11	father
6	12	mother
7	13	father
7	14	mother
8	15	father
8	16	mother
9	17	father
9	18	mother
10	19	father
10	20	mother
11	21	father
11	22	mother
12	23	father
12	24	mother
13	25	father
13	26	mother
14	27	father
14	28	mother
15	29	father
15	30	mother
16	31	father
16	32	mother
17	33	father
17	34	mother
18	35	father
18	36	mother
19	37	father
19	38	mother
20	39	father
20	40	mother

parent_id	first_name	last_name	nid	phone	email	image_src	address_id
1	Rafiqul	Islam	5268255276234	01743777283	rafiquleng1968@gmail.com	/rafiqul_islam	1
2	Amina	Khatun	8291736521345	01987654321	amina.khatun@example.com	/amina_khatun	5
3	Abdul	Haque	7325162873492	01876543210	abdul.haque@example.com	/abdul_haque	10
4	Fatima	Begum	6459837124731	01654321098	fatima.begum@example.com	/fatima_begum	15
5	Akbar	Ali	9283416758923	01543210987	akbar.ali@example.com	/akbar_ali	20
6	Nasrin	Jahan	1837462958374	01765432109	nasrin.jahan@example.com	/nasrin_jahan	25
7	Shafi	Ahmed	5738291462853	01987654321	shafi.ahmed@example.com	/shafi_ahmed	30
8	Nadia	Khan	3481926573845	01876543210	nadia.khan@example.com	/nadia_khan	35
9	Ibrahim	Rahman	9274658319245	01654321098	ibrahim.rahman@example.com	/ibrahim_rahman	40
10	Fahima	Akhter	5123789647513	01543210987	fahima.akhter@example.com	/fahima_akhter	45
11	Mazharul	Islam	8392475617324	01765432109	mazharul.islam@example.com	/mazharul_islam	50
12	Sultana	Begum	4738291562837	01987654321	sultana.begum@example.com	/sultana_begum	55
13	Nurul	Alam	6738124956732	01876543210	nurul.alam@example.com	/nurul_alam	60
14	Sabina	Binte	2573189462873	01654321098	sabina.binte@example.com	/sabina_binte	65
15	Rahim	Uddin	9831745628734	01543210987	rahim.uddin@example.com	/rahim_uddin	70
16	Tahmina	Akter	1734658293475	01765432109	tahmina.akter@example.com	/tahmina_akter	75
17	Nasir	Khan	3981726542835	01987654321	nasir.khan@example.com	/nasir_khan	5
18	Nusrat	Jahan	8273465193726	01876543210	nusrat.jahan@example.com	/nusrat_jahan	10
19	Farid	Hossain	2384956719345	01654321098	farid.hossain@example.com	/farid_hossain	15
20	Salma	Akhter	8734165928731	01543210987	salma.akhter@example.com	/salma_akhter	20
21	Rahman	Ali	5629381475638	01765432109	rahman.ali@example.com	/rahman_ali	25
22	Faria	Khatun	1928745631984	01987654321	faria.khatun@example.com	/faria_khatun	30
23	Mosharraf	Hossain	6538192745692	01876543210	mosharraf.hossain@example...	/mosharraf_ho...	35
24	Amina	Begum	7834619528735	01654321098	amina.begum@example.com	/amina_begum	40
25	Alamgir	Khan	2371845693124	01543210987	alamgir.khan@example.com	/alamgir_khan	45
26	Shireen	Akhter	1245387691245	01765432109	shireen.akhter@example.com	/shireen_akhter	50
27	Rahat	Hossain	5346789124781	01987654321	rahat.hossain@example.com	/rahat_hossain	55
28	Nahid	Islam	8765492317493	01876543210	nahid.islam@example.com	/nahid_islam	60
29	Sonia	Begum	2391876543198	01654321098	sonia.begum@example.com	/sonia_begum	65
30	Aftab	Ali	7834926512734	01543210987	aftab.ali@example.com	/aftab_ali	70
31	Zarin	Jahan	1847659321784	01765432109	zarin.jahan@example.com	/zarin_jahan	75
32	Mahbub	Khan	4738192561782	01987654321	mahbub.khan@example.com	/mahbub_khan	1
33	Rozina	Akter	9237416582934	01876543210	rozina.akter@example.com	/rozina_akter	6
34	Sakib	Ahmed	2374896512394	01654321098	sakib.ahmed@example.com	/sakib_ahmed	11
35	Maliha	Jahan	1928345673124	01543210987	maliha.jahan@example.com	/maliha_jahan	16
36	Mamun	Hossain	5346729138492	01765432109	mamun.hossain@example.com	/mamun_hossain	21
37	Rehana	Begum	9837416523189	01987654321	rehana.begum@example.com	/rehana_begum	26
38	Arif	Ali	3748561298732	01876543210	arif.ali@example.com	/arif_ali	31
39	Sabrina	Khatun	2193486751329	01654321098	sabrina.khatun@example.com	/sabrina_khatun	36
40	Rafiq	Ahmed	7348916527394	01543210987	rafiq.ahmed@example.com	/rafiq_ahmed	41

id	student_name	class	class_teacher	exam_type	exam_held	sub_code	sub_name ∨	cq	mcq	mark	qualification
216	Ava Lee	six	Noah Clark	pre test	2022-09-16	110	Music	10.00	24.00	34.00	Passed
158	Michael Clark	six	Noah Clark	pre test	2022-09-16	110	Music	28.00	27.00	55.00	Passed
146	Paisley Moore	six	Noah Clark	half yearly	2022-06-12	110	Music	48.00	11.00	59.00	Passed
175	Abigail Hill	six	Noah Clark	pre test	2022-09-16	110	Music	46.00	8.00	54.00	Passed
90	Leo Johnson	six	Noah Clark	test	2022-10-15	110	Music	56.00	31.00	87.00	Passed
193	Nora Roberts	six	Noah Clark	annual	2022-11-25	110	Music	10.00	6.00	16.00	Failed
57	Sophia Brown	se…	Emma Davis	pre test	2022-09-16	110	Music	4.00	20.00	24.00	Failed
88	Henry Taylor	se…	Emma Davis	half yearly	2022-06-12	110	Music	7.00	10.00	17.00	Failed
177	Ella Miller	se…	Emma Davis	annual	2022-11-25	110	Music	21.00	37.00	58.00	Passed
303	Eleanor Johnson	se…	Emma Davis	annual	2022-11-25	110	Music	49.00	6.00	55.00	Passed
152	Luna Taylor	se…	Emma Davis	final	2022-12-12	110	Music	50.00	23.00	73.00	Passed
81	Lily Wilson	eight	James Smith	pre test	2022-09-16	110	Music	51.00	4.00	55.00	Passed
256	Eyasir Ahamed	eight	James Smith	test	2022-10-15	110	Music	30.00	10.00	40.00	Passed
300	Isaac Anderson	eight	James Smith	annual	2022-11-25	110	Music	5.00	7.00	12.00	Failed
300	Isaac Anderson	eight	James Smith	final	2022-12-12	110	Music	49.00	4.00	53.00	Passed
161	Olivia Anderson	eight	James Smith	annual	2022-11-25	110	Music	51.00	25.00	76.00	Passed
258	David Miller	nine	John Doe	test	2022-10-15	110	Music	11.00	27.00	38.00	Passed
243	Leo Johnson	nine	John Doe	final	2022-12-12	110	Music	9.00	16.00	25.00	Failed
262	Daniel Davis	nine	John Doe	half yearly	2022-06-12	110	Music	4.00	24.00	28.00	Failed
258	David Miller	nine	John Doe	test	2022-10-15	110	Music	14.00	14.00	28.00	Failed
277	Abigail Hill	nine	John Doe	half yearly	2022-06-12	110	Music	51.00	23.00	74.00	Passed
305	Luna Taylor	nine	John Doe	final	2022-12-12	110	Music	15.00	11.00	26.00	Failed
147	Isaac Anderson	nine	John Doe	pre test	2022-09-16	110	Music	12.00	13.00	25.00	Failed
248	Paisley Moore	nine	John Doe	annual	2022-11-25	110	Music	32.00	25.00	57.00	Passed
25	Joseph Clark	nine	John Doe	test	2022-10-15	110	Music	52.00	2.00	54.00	Passed
213	Ethan White	ten	Noah Clark	annual	2022-11-25	110	Music	48.00	5.00	53.00	Passed
58	Daniel Davis	ten	Noah Clark	half yearly	2022-06-12	110	Music	24.00	15.00	39.00	Passed
122	Chloe Moore	ten	Noah Clark	annual	2022-11-25	110	Music	47.00	14.00	61.00	Passed
306	Liam Hall	ten	Noah Clark	final	2022-12-12	110	Music	37.00	8.00	45.00	Passed
84	Elijah Davis	ten	Noah Clark	final	2022-12-12	110	Music	41.00	3.00	44.00	Passed
36	Aurora Smith	ten	Noah Clark	annual	2022-11-25	110	Music	53.00	23.00	76.00	Passed
130	Avery Williams	ten	Noah Clark	annual	2022-11-25	110	Music	46.00	38.00	84.00	Passed
66	Alexander Wang	ten	Noah Clark	final	2022-12-12	110	Music	55.00	33.00	88.00	Passed
211	Daniel Davis	ten	Noah Clark	annual	2022-11-25	110	Music	42.00	28.00	70.00	Passed
73	Abigail Hill	ten	Noah Clark	test	2022-10-15	110	Music	9.00	14.00	23.00	Failed
122	Chloe Moore	ten	Noah Clark	final	2022-12-12	110	Music	41.00	15.00	56.00	Passed
84	Elijah Davis	ten	Noah Clark	pre test	2022-09-16	110	Music	30.00	7.00	37.00	Passed

3NF

2NF is perfect but it does not eliminate transitive partial dependency. So we need another normalization

- Must be in 2NF.
- Have no transitive partial dependency.

(Means a non-prime attribute is NOT dependent on another non-prime attribute.)

Student table:

student_id	first_name	last_name	gender	date_of_birth	image_src	phone	email	address_id
1	Eyasir	Ahamed	male	2002-12-0...	...ahamed	01709436723	eyasir329@gmail.com	1
2	Sarah	Wilson	female	2002-06-14 00:00:00	/sarah_wilson	09876543210	sarah.wilson@example.com	15
3	David	Miller	male	2003-02-28 00:00:00	/david_miller	01234567890	david.miller@example.com	8
4	Emily	Jones	female	2002-10-07 00:00:00	/emily_jones	07654321098	emily.jones@example.com	22
5	Michael	Clark	male	2003-07-19 00:00:00	/michael_clark	01122334455	michael.clark@example.com	31
6	Sophia	Brown	female	2002-04-26 00:00:00	/sophia_brown	01234567890	sophia.brown@example.com	16
7	Daniel	Davis	male	2003-11-03 00:00:00	/daniel_davis	07654321098	daniel.davis@example.com	30
8	Olivia	Anderson	female	2002-09-12 00:00:00	/olivia_anderson	01122334455	olivia.anderson@example.com	10
9	Ethan	White	male	2003-01-15 00:00:00	/ethan_white	09876543210	ethan.white@example.com	25
10	Mia	Taylor	female	2002-05-20 00:00:00	/mia_taylor	01234567890	mia.taylor@example.com	18
11	Christop...	Moore	male	2003-08-09 00:00:00	/christopher_...	07654321098	christopher.moore@example....	27
12	Ava	Lee	female	2002-12-24 00:00:00	/ava_lee	01122334455	ava.lee@example.com	5
13	Liam	Smith	male	2003-03-31 00:00:00	/liam_smith	09876543210	liam.smith@example.com	14
14	Emma	Harris	female	2002-07-05 00:00:00	/emma_harris	01234567890	emma.harris@example.com	33
15	Alexander	Wang	male	2003-01-28 00:00:00	/alexander_w...	07654321098	alexander.wang@example.com	2
16	Aria	Johnson	female	2002-10-13 00:00:00	/aria_johnson	01122334455	aria.johnson@example.com	29
17	Matthew	Roberts	male	2003-05-18 00:00:00	/matthew_rob...	09876543210	matthew.roberts@example.com	21
18	Amelia	Davis	female	2002-08-02 00:00:00	/amelia_davis	01234567890	amelia.davis@example.com	12
19	Benjamin	Wilson	male	2003-02-09 00:00:00	/benjamin_wil...	07654321098	benjamin.wilson@example.com	7
20	Chloe	Moore	female	2002-11-16 00:00:00	/chloe_moore	01122334455	chloe.moore@example.com	19

Insert new row

Teacher table:

teacher_id	first_name	last_name	position	salary	image_src	phone	email	facebook	linkedin	address_id
1	Kabir	Ahamed	assistant teacher	30000	/kabir_ahamed	01702136723	kabie320@gmail.com	fb.com/kabie	linkedin.com/kabie	10
2	Esrat	Sarmin	lecturer	40000	/esrat_sarmin	01876543210	esrat.sarmin@example.com	fb.com/esrat.sarmin	linkedin.com/esratsarmin	20
3	John	Doe	assistant professor	50000	/john_doe	01987654321	john.doe@example.com	fb.com/john.doe	linkedin.com/johndoe	30
4	Michael	Smith	professor	55000	/michael_smith	01612345678	michael.smith@example.com	fb.com/michael.smith	linkedin.com/michaelsmith	40
5	Sophia	Johnson	lecturer	45000	/sophia_johnson	01723456789	sophia.johnson@example.com	fb.com/sophia.johnson	linkedin.com/sophiajohnson	50
6	David	Williams	assistant professor	48000	/david_williams	01634567890	david.williams@example.com	fb.com/david.williams	linkedin.com/davidwilliams	60
7	Emily	Brown	professor	52000	/emily_brown	01745678901	emily.brown@example.com	fb.com/emily.brown	linkedin.com/emilybrown	70
8	Ethan	Miller	assistant teacher	32000	/ethan_miller	01656789012	ethan.miller@example.com	fb.com/ethan.miller	linkedin.com/ethanmiller	12
9	Ava	Moore	lecturer	35000	/ava_moore	01767890123	ava.moore@example.com	fb.com/ava.moore	linkedin.com/avamoore	23
10	Oliver	Smith	professor	58000	/oliver_smith	01678901234	oliver.smith@example.com	fb.com/oliver.smith	linkedin.com/oliversmith	15
11	Emma	Davis	assistant professor	59000	/emma_davis	01789012345	emma.davis@example.com	fb.com/emma.davis	linkedin.com/emmadavis	25
12	Liam	Anderson	lecturer	40000	/liam_anderson	01890123456	liam.anderson@example.com	fb.com/liam.anderson	linkedin.com/liamanderson	35
13	Olivia	Taylor	professor	52000	/olivia_taylor	01901234567	olivia.taylor@example.com	fb.com/olivia.taylor	linkedin.com/oliviataylor	45
14	Noah	Clark	assistant teacher	32000	/noah_clark	01234567890	noah.clark@example.com	fb.com/noah.clark	linkedin.com/noahclark	55
15	Isabella	Hill	lecturer	35000	/isabella_hill	09876543210	isabella.hill@example.com	fb.com/isabella.hill	linkedin.com/isabellahill	65
16	James	Smith	professor	58000	/james_smith	01122334455	james.smith@example.com	fb.com/james.smith	linkedin.com/jamessmith	75
17	Kabir	Ahamed	assistant teacher	30000	/kabir_ahamed	01702136723	kabie320@gmail.com	fb.com/kabie	linkedin.com/kabie	10
18	Esrat	Sarmin	lecturer	40000	/esrat_sarmin	01876543210	esrat.sarmin@example.com	fb.com/esrat.sarmin	linkedin.com/esratsarmin	20
19	John	Doe	assistant professor	50000	/john_doe	01987654321	john.doe@example.com	fb.com/john.doe	linkedin.com/johndoe	30
20	Michael	Smith	professor	55000	/michael_smith	01612345678	michael.smith@example.com	fb.com/michael.smith	linkedin.com/michaelsmith	40

Student-academic table:

student_id	academic_id
6	1
16	1
28	1
43	1
47	1
61	1
68	1
79	1
85	1
92	1
95	1
100	1
110	1
123	1
131	1
139	1
143	1
154	1
160	1
180	1

Academic / class table:

academic_id	class_name	room_number	class_teacher_id	start_from
1	one	101	12	2022-01-01
2	two	102	7	2022-01-01
3	three	103	23	2022-01-01
4	four	104	31	2022-01-01
5	five	105	19	2022-01-01
6	six	106	14	2022-01-01
7	seven	107	27	2022-01-01
8	eight	108	32	2022-01-01
9	nine	109	19	2022-01-01
10	ten	110	14	2022-01-01

Academic-subject table:
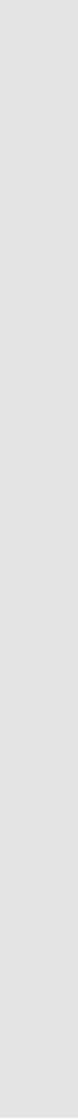
academic_id	subject_id
1	1
2	1
3	1
4	1
5	1
6	1
7	1
8	1
9	1
10	1
1	2
2	2
3	2
4	2
5	2
6	2
7	2
8	2
9	2
10	2

Subject table:

subject_id	sub_name
1	Bangla
2	English
3	Mathematics
4	Religion & Moral Education
5	Science
6	BD & Glob.Studies
7	Physical Edu. & Health
8	Arts & Crafts
9	Introduction to Environment, ...
10	Music
11	Bengali grammar and constr...
12	English Grammar and Comp...
13	Information and communicati...
14	Agriculture education
15	Work and life oriented educat...
16	Domestic science

Exam table:

exam_id	type_id	exam_held
1	1	2022-06-12
2	2	2022-11-25
3	3	2022-12-12
4	4	2022-10-15
5	5	2022-09-16

Type table:

type_id	type_name
1	half yearly
2	annual
3	final
4	test
5	pre test

Mark table:

mark_id	student_id	subject_id	exam_id	cq	mcq
1	39	11	5	22.00	1.00
2	127	9	4	38.00	30.00
3	227	14	3	4.00	26.00
4	6	8	4	55.00	17.00
5	219	4	4	12.00	16.00
6	76	13	4	42.00	26.00
7	292	2	1	16.00	23.00
8	108	7	1	12.00	34.00
9	160	12	2	28.00	4.00
10	266	8	2	58.00	11.00
11	275	3	3	45.00	24.00
12	36	13	4	1.00	2.00
13	50	14	3	43.00	2.00
14	134	16	5	32.00	22.00
15	73	11	2	53.00	34.00
16	60	9	1	44.00	25.00
17	84	10	5	30.00	7.00
18	253	14	3	23.00	24.00
19	112	8	4	38.00	18.00
20	35	1	5	13.00	1.00

Previous Process is Applied for all other table...

```sql
SELECT
    s.student_id as id,
    CONCAT(s.image_src,'.png') as picture,
    CONCAT(s.first_name,' ',s.last_name) as student_name,
    s.gender as gender,
    YEAR(s.date_of_birth) as birthyear,
    s.email,
    s.phone as phone,
    CONCAT(f.first_name,' ',f.last_name) as father,
    CONCAT(m.first_name,' ',m.last_name) as mother,
    CONCAT(a.division,', ',a.district,', ',a.upazilla,', ',a.postal_code) as address,
    ac.class_name as class,
    CONCAT(t.first_name,' ',t.last_name) as class_teacher,
    et.type_name as exam_type,
    e.exam_held,
    mk.subject_id+100 as sub_code,
    sub.sub_name,
    mk.cq+mk.mcq as mark,
    CASE
        WHEN mk.cq+mk.mcq>=33 THEN 'Passed'
        ELSE 'Failed'
    END AS qualification
FROM
students as s
JOIN student_status as ss ON ss.student_id=s.student_id
JOIN addresses as a ON a.address_id=s.address_id
JOIN academics as ac ON ac.academic_id=ss.academic_id
JOIN teaches as t ON ac.class_teacher_id=t.teacher_id
JOIN marks as mk ON s.student_id=mk.student_id and mk.subject_id IN(SELECT subject_id FROM subjects WHERE subject_id=10)
JOIN exams as e ON e.exam_id=mk.exam_id
JOIN ex_type as et ON e.type_id=et.type_id
JOIN subjects as sub ON sub.subject_id=mk.subject_id
JOIN student_parent as spf ON s.student_id=spf.student_id
JOIN parents as f ON spf.parent_id=f.parent_id AND spf.relation='father'
JOIN student_parent as spm ON s.student_id=spm.student_id
JOIN parents as m ON spm.parent_id=m.parent_id AND spm.relation='mother'
WHERE
    s.student_id = ss.student_id
    and ss.academic_id>5 order by ss.academic_id;
```

#	id	picture	student_name	gender	birthyear	email	phone	father	mother	address	class	class_teacher	exam_type	exam_held	sub_code	sub_name	mark	qualification
1	276	/william_anderson....	William Ander...	male	2003	william.anderson@example.c...	09876543210	Abdul Haque	Fatima Begum	Chittagong, Lakshmipur, Lakshmipur Sadar...	ten	Noah Clark	half yearly	2022-06-12	109	Introduction to Environment, Societ...	76.00	Passed
2	254	/luna_taylor.png	Luna Taylor	female	2002	luna.taylor@example.com	01234567890	Farid Hossain	Salma Akhter	Barisal, Bhola, Bhola Sadar, 8300	ten	Noah Clark	half yearly	2022-06-12	109	Introduction to Environment, Societ...	84.00	Passed
3	231	/logan_brown.png	Logan Brown	male	2003	logan.brown@example.com	07654321098	Fatima Begum	Abdul Haque	Rajshahi, Bogra, Bogra Sadar, 5800	ten	Noah Clark	half yearly	2022-06-12	106	BD & Glob.Studies	42.00	Passed
4	129	/logan_brown.png	Logan Brown	male	2003	logan.brown@example.com	07654321098	Ibrahim Rahman	Fahima Akhter	Rajshahi, Bogra, Bogra Sadar, 5800	ten	Noah Clark	half yearly	2022-06-12	112	English Grammar and Composition	63.00	Passed
5	166	/liam_smith.png	Liam Smith	male	2003	liam.smith@example.com	09876543210	Mosharraf Hossain	Amina Begum	Chittagong, Feni, Feni Sadar, 3900	ten	Noah Clark	half yearly	2022-06-12	111	Bengali grammar and construction	36.00	Passed
6	133	/jack_harris.png	Jack Harris	male	2003	jack.harris@example.com	07654321098	Nasir Khan	Nusrat Jahan	Barisal, Barisal, Barisal Sadar, 8200	ten	Noah Clark	half yearly	2022-06-12	103	Mathematics	80.00	Passed
7	292	/henry_taylor.png	Henry Taylor	male	2003	henry.taylor@example.com	09876543210	Nasrin Jahan	Akbar Ali	Khulna, Satkhira, Satkhira Sadar, 9400	ten	Noah Clark	half yearly	2022-06-12	102	English	39.00	Passed
8	292	/henry_taylor.png	Henry Taylor	male	2003	henry.taylor@example.com	09876543210	Nasrin Jahan	Akbar Ali	Khulna, Satkhira, Satkhira Sadar, 9400	ten	Noah Clark	half yearly	2022-06-12	111	Bengali grammar and construction	37.00	Passed
9	137	/gabriel_white.png	Gabriel White	male	2003	gabriel.white@example.com	07654321098	Alamgir Khan	Shireen Ak...	Rajshahi, Pabna, Pabna Sadar, 6600	ten	Noah Clark	half yearly	2022-06-12	102	English	34.00	Passed
10	213	/ethan_white.png	Ethan White	male	2003	ethan.white@example.com	09876543210	Nahid Islam	Rahat Hoss...	Dhaka, Narsingdi, Narsingdi Sadar, 1600	ten	Noah Clark	half yearly	2022-06-12	109	Introduction to Environment, Societ...	31.00	Failed
11	4	/emily_jones.png	Emily Jones	female	2002	emily.jones@example.com	07654321098	Shafi Ahmed	Nadia Khan	Khulna, Satkhira, Satkhira Sadar, 9400	ten	Noah Clark	half yearly	2022-06-12	115	Work and life oriented education	43.00	Passed
12	54	/david_miller.png	David Miller	male	2003	david.miller@example.com	01234567890	Akbar Ali	Nasrin Jahan	Chittagong, Comilla, Comilla Sadar, 3500	ten	Noah Clark	half yearly	2022-06-12	105	Science	73.00	Passed
13	54	/david_miller.png	David Miller	male	2003	david.miller@example.com	01234567890	Akbar Ali	Nasrin Jahan	Chittagong, Comilla, Comilla Sadar, 3500	ten	Noah Clark	half yearly	2022-06-12	113	Information and communication tec...	22.00	Failed
14	211	/daniel_davis.png	Daniel Davis	male	2003	daniel.davis@example.com	07654321098	Amina Begum	Mosharraf ...	Barisal, Bhola, Lalmohan, 8310	ten	Noah Clark	half yearly	2022-06-12	112	English Grammar and Composition	31.00	Failed
15	58	/daniel_davis.png	Daniel Davis	male	2003	daniel.davis@example.com	07654321098	Nurul Alam	Sabina Binte	Barisal, Bhola, Lalmohan, 8310	ten	Noah Clark	half yearly	2022-06-12	110	Music	39.00	Passed
16	70	/benjamin_wilson.png	Benjamin Wilson	male	2003	benjamin.wilson@example.com	07654321098	Rehana Begum	Arif Ali	Dhaka, Gazipur, Sreepur, 1700	ten	Noah Clark	half yearly	2022-06-12	113	Information and communication tec...	22.00	Failed
17	130	/avery_williams.png	Avery Williams	female	2002	avery.williams@example.com	01122334455	Mazharul Islam	Sultana Be...	Barisal, Jhalokathi, Jhalokathi Sadar, 8400	ten	Noah Clark	half yearly	2022-06-12	102	English	55.00	Passed
18	12	/ava_lee.png	Ava Lee	female	2002	ava.lee@example.com	01122334455	Mosharraf Hossain	Amina Begum	Sylhet, Sylhet, Sylhet Sadar, 3100	ten	Noah Clark	half yearly	2022-06-12	102	English	69.00	Passed
19	36	/aurora_smith.png	Aurora Smith	female	2002	aurora.smith@example.com	01122334455	Sonia Begum	Aftab Ali	Chittagong, Comilla, Comilla Sadar, 3500	ten	Noah Clark	half yearly	2022-06-12	116	Domestic science	37.00	Passed
20	118	/aria_johnson.png	Aria Johnson	female	2002	aria.johnson@example.com	01122334455	Nusrat Jahan	Nasir Khan	Sylhet, Moulvibazar, Kamalganj, 3204	ten	Noah Clark	half yearly	2022-06-12	111	Bengali grammar and construction	94.00	Passed
21	66	/alexander_wang.png	Alexander Wang	male	2003	alexander.wang@example.com	07654321098	Sonia Begum	Aftab Ali	Chittagong, Chittagong, Chandgaon, 4000	ten	Noah Clark	half yearly	2022-06-12	104	Religion & Moral Education	17.00	Failed

parents
- 🔑 parent_id INT
- ◇ first_name VARCHAR(100)
- ◇ last_name VARCHAR(100)
- ◇ nid VARCHAR(100)
- ◇ phone VARCHAR(15)
- ◇ email VARCHAR(255)
- ◇ image_src VARCHAR(255)
- ◆ address_id INT
- Indexes

addresses
- 🔑 address_id INT
- ◇ division VARCHAR(50)
- ◇ district VARCHAR(50)
- ◇ upazilla VARCHAR(50)
- ◇ postal_code INT
- Indexes

students
- 🔑 student_id INT
- ◇ first_name VARCHAR(100)
- ◇ last_name VARCHAR(100)
- ◇ gender VARCHAR(10)
- ◇ date_of_birth DATETIME
- ◇ image_src VARCHAR(255)
- ◇ phone VARCHAR(15)
- ◇ email VARCHAR(255)
- ◆ address_id INT
- Indexes

staffs
- 🔑 staff_id INT
- ◇ first_name VARCHAR(100)
- ◇ last_name VARCHAR(100)
- ◇ position VARCHAR(100)
- ◇ salary VARCHAR(10)
- ◇ image_src VARCHAR(255)
- ◇ phone VARCHAR(15)
- ◇ email VARCHAR(255)
- ◇ facebook VARCHAR(255)
- ◇ linkedin VARCHAR(255)
- ◆ address_id INT
- Indexes

ex_type
- 🔑 type_id INT
- ◇ type_name VARCHAR(25)
- Indexes

student_parent
- ◆ student_id INT
- ◆ parent_id INT
- ◇ relation VARCHAR(10)
- Indexes

school
- ◇ eiin VARCHAR(255)
- ◇ school_name VARCHAR(255)
- ◆ principal_id INT
- ◆ address_id INT
- ◇ phone VARCHAR(15)
- ◇ email VARCHAR(255)
- ◇ established_at DATETIME
- Indexes

exams
- 🔑 exam_id INT
- ◆ type_id INT
- ◇ exam_held DATE
- Indexes

student_status
- ◆ student_id INT
- ◆ academic_id INT
- Indexes

academics
- 🔑 academic_id INT
- ◇ class_name VARCHAR(20)
- ◇ room_number INT
- ◆ class_teacher_id INT
- ◆ start_from DATE
- ◇ end_to DATE
- Indexes

teaches
- 🔑 teacher_id INT
- ◇ first_name VARCHAR(100)
- ◇ last_name VARCHAR(100)
- ◇ position VARCHAR(100)
- ◇ salary VARCHAR(10)
- ◇ image_src VARCHAR(255)
- ◇ phone VARCHAR(15)
- ◇ email VARCHAR(255)
- ◇ facebook VARCHAR(255)
- ◇ linkedin VARCHAR(255)
- ◆ address_id INT
- Indexes

marks
- 🔑 mark_id INT
- ◆ student_id INT
- ◆ subject_id INT
- ◆ exam_id INT
- ◇ cq DECIMAL(5,2)
- ◇ mcq DECIMAL(5,2)
- ◇ attendance INT
- ◇ homework INT
- Indexes

class_subjects
- ◆ academic_id INT
- ◆ subject_id INT
- Indexes

teacher_subjects
- ◆ teacher_id INT
- ◆ subject_id INT
- Indexes

principals
- 🔑 principal_id INT
- ◆ teacher_id INT
- ◇ principal_text VARCHAR(255)
- ◇ start_from DATETIME
- ◇ end_to DATETIME
- Indexes

subjects
- 🔑 subject_id INT
- ◇ sub_name VARCHAR(255)
- Indexes