

1091711 林柔均

6/14 Fin Project for Database

- ERD and the BusinessRule
- Data dictionstry for ArtExhibition
- Final project demo. text

The artworks are created by the artists.

An artist can create more than one artwork.

An artwork mostly done by an artist.

The artist must create at least one artwork, and an artwork can't be created without the artist.

-

The artist joins the exhibition by the collaboration.

An exhibition should be joined by one or more than one artist.

The artists can join more than one exhibition, or don't join any exhibition.

-

The exhibition is planned by at least one organizer, and just one organizer each time.

The organizer can plan more than one exhibition, or don't plan any exhibition.

An exhibition needs a site to be exhibited. Many be one site, more than one sites, or don't need any site. (May be an online exhibition.)

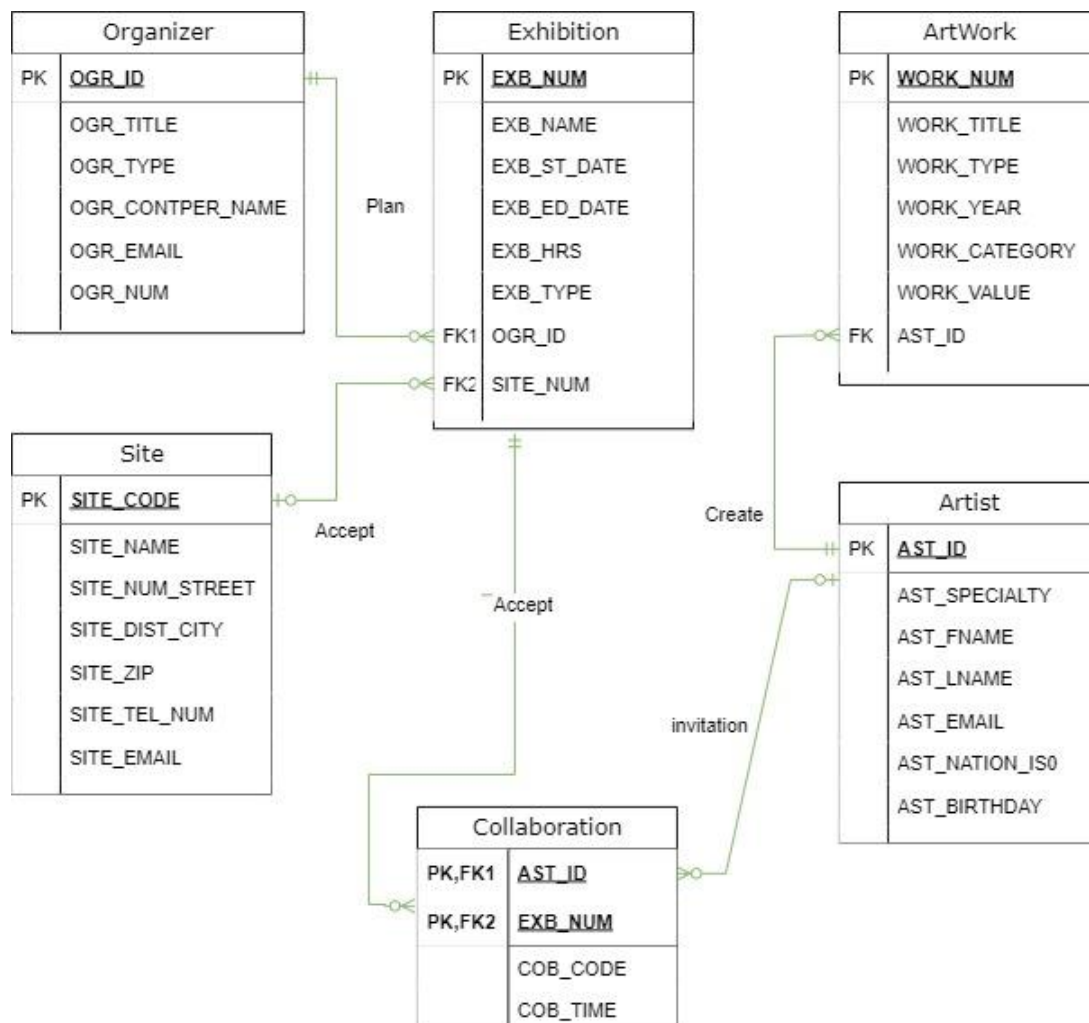


Table Name	Attribute Name	Contents	Type	Format	Required	PK or FK	FK referenced table
Artist	AST_ID	Artist's ID	CHAR(7)	999-999	Y	PK	
	AST_SPECIALTY	Artist's Specialty	VARCHAR(25)	Xxxxxxxx	Y		
	AST_LNAME	Artist's Last Name	VARCHAR(25)	Xxxxxxxx	Y		
	AST_FNAME	Artist's First Name	VARCHAR(25)	Xxxxxxxx	Y		
	AST_EMAIL	Artist's Email	VARCHAR(30)	Xxxxxxxx	Y		
	AST_NATION_ISO	Artist's nationality	CHAR(3)	Xxx			
	AST_BIRTHDAY	Artist's birthday in year-to-date form	date	yyyy-mm-dd			
ArtWork	WORK_NUM	Artwork's Number	CHAR(6)	999999	Y	PK	
	WORK_TITLE	Artwork's Title	VARCHAR(30)	Xxxxxxxx	Y		
	WORK_TYPE	Type of artwork's presentation	VARCHAR(30)	Xxxxxxxx	Y		
	WORK_YEAR	Year the artwork was completed.	NUMERIC(4)	9999			
	WORK_CATEGORY	Artwork's category	VARCHAR(25)	Xxxxxxxx	Y		
	WORK_VALUE	Artwork's value	FLOAT(10)	9999999.99			
	AST_ID	Artist of the artwork.	CHAR(7)	999-999	Y	FK	Artist
Organizer	OGR_ID	The ID of the Organizer	VARCHAR(15)	Xxxxxxxx	Y	PK	
	OGR_TITLE	Organizer's title	VARCHAR(30)	Xxxxxxxx	Y		
	OGR_TYPE	Organizer's type	VARCHAR(25)	Xxxxxxxx	Y		
	OGR_CONTPER_NAME	Contact person of the organizer	VARCHAR(25)	Xxxxxxxx			
	OGR_EMAIL	Organizer's email	VARCHAR(30)	xxxx@xxxx	Y		
	OGR_NUM	Organizer's phone number	VARCHAR(30)	+999-9-9999-9999'			
Sites	SITE_CODE	Site's code	NCHAR(7)	XX-999	Y	PK	
	SITE_NAME	Site's name	VARCHAR(50)	Xxxxxxxx	Y		
	SITE_NUM_STREET	Number and street name of site's address	VARCHAR(70)	Xxxxxxxx	Y		
	SITE_DIST_CITY	The city and district of the site.	VARCHAR(50)	Xxxxxxxx	Y		
	SITE_ZIP	Number and street name of site's address	CHAR(6)	999999			
	SITE_EMAIL	Site's contact mailbox	VARCHAR(30)	xxxx@xxxx	Y		
	SITE_TEL_NUM	Site's contact telephone number	VARCHAR(20)	+999-9-9999-9999'			
Exhibition	EXB_NUM	Exhibition's number	NUMERIC(6,0)	999999	Y	PK	
	EXB_NAME	Exhibition's name	VARCHAR(70)	Xxxxxxxx	Y		
	EXB_ST_DATE	The start date of the exhibition	date	yyyy-mm-dd	Y		
	EXB_ED_DATE	The end date of the exhibition	date	yyyy-mm-dd	Y		
	EXB_TOT_HRS	Total exhibition hours	FLOAT(6)	999.99			
	EXB_TYPE	Exhibition's type	VARCHAR(25)	Xxxxxxxx	Y		
	OGR_ID	ID of the exhibition's organizer	VARCHAR(15)	Xxxxxxxx	Y	FK	Organizer
	SITE_NUM	Site used for exhibition	NCHAR(7)	XX-999	Y	FK	Sites
Collaboration	AST_ID	Artist who join the collaboration	CHAR(7)	999-999	Y	PK,FK1	Artist
	EXB_NUM	Number of the exhibition to the collaboration	NUMERIC(6,0)	999999	Y	PK,FK2	Exhibition
	COB_CODE	Code of the Collaboration	NUMERIC(15,0)	1E+15	Y		
	COB_TIME	Date of the collabotation is established	date	yyyy-mm-dd			

This is an explanation of every action of the project for Datadase System final
(I don't know why there is a red bottom line, but it's okay to execute the action.)

- (1) **Count the number of artworks each artist has.** List out ID, name, and the nationality of the artists, and ascending order by the number of artworks.

```
/*01*/
/*Count the number of artworks each artist has.*/
SELECT ARTWORK.AST_ID,AST_FNAME,AST_LNAME,COUNT(DISTINCT WORK_NUM)AS 'How much artworks exhibited.'
FROM ARTWORK JOIN ARTIST ON ARTWORK.AST_ID = ARTIST.AST_ID
GROUP BY ARTWORK.AST_ID,AST_FNAME,AST_LNAME
ORDER BY 'How much artworks exhibited.'
```

	AST_ID	AST_FNAME	AST_LNAME	How much artworks exhibited.
1	110-015	Xing	Liu	1
2	201-294	Ren	Kaise	1
3	110-732	Guei-Yu	Lai	1
4	201-238	Ruri	Efuji	2
5	236-099	Xiang	Han	2
6	236-493	Kim	Jin	2
7	401-110	Emliy	Brown	2
8	401-148	Louis	Miller	2
9	403-432	Marie	Martin	2
10	110-167	Oliver	Tsai	2
11	110-268	Ting	Fang	2
12	110-281	Wen-Sin	Lin	2
13	110-290	Mindy	Xia	2
14	202-095	Youta	Daidoji	3
15	202-265	Sakuru	Machii	3
16	220-163	Jun-Wang	Li	3
17	236-026	Lara	Park	3

- (2) **Find artists who are not participating in any exhibitions during this period,** here it is expressed in the way of excluding those who participated in the cooperation, and then list these excluded data.

```
/*02*/
/*Find artists who are not participating in any exhibitions during this period.*/
SELECT AST_ID,AST_FNAME,AST_LNAME,AST_NATION_ISO
FROM ARTIST
WHERE AST_ID NOT IN (SELECT COLLABORATION.AST_ID FROM COLLABORATION)
ORDER BY AST_ID;
```

	AST_ID	AST_FNAME	AST_LNAME	AST_NATION_ISO
1	202-100	Motonao	Gunichi	JPN
2	236-449	Beomgeun	Kong	KOR

- (3) **List artists who are exhibiting in Taipei.** The attribute "SITE_NUM" in "EXHIBITION", which is the code name of the FK SITES, can be used to find the location of the exhibition.

```

/*03*/
/*List artists who are exhibiting in Taipei.*/
SELECT COLLABORATION.AST_ID, EXHIBITION.SITE_NUM, EXB_NAME, EXHIBITION.OGR_ID
FROM COLLABORATION JOIN EXHIBITION ON COLLABORATION.EXB_NUM = EXHIBITION.EXB_NUM JOIN ARTIST
ON COLLABORATION.AST_ID = ARTIST.AST_ID
WHERE EXHIBITION.SITE_NUM LIKE 'TP-%'

```

	AST_ID	SITE_NUM	EXB_NAME	OGR_ID
1	110-015	TP-003	Local Art Co-Creation	15924340
2	110-167	TP-003	Local Art Co-Creation	15924340
3	110-268	TP-003	Local Art Co-Creation	15924340
4	110-732	TP-003	Local Art Co-Creation	15924340
5	202-095	TP-003	ECHO - Urban Photography Exhibition	15924340
6	220-163	TP-003	ECHO - Urban Photography Exhibition	15924340
7	236-493	TP-003	ECHO - Urban Photography Exhibition	15924340
8	110-281	TP-006	Digitalk - Wen&Mindys Co-Creation	A230142553
9	110-290	TP-006	Digitalk - Wen&Mindys Co-Creation	A230142553
10	202-265	TP-012	Amusement Waltz-Sakuru Machii Solo Exhibition	15273909

- (4) **Add an artist named "ShenHua", who joined the "ECHO - Urban Photography Exhibition" at a later date with her two artworks.**

```

/*04*/
/*Add an artist named "ShenHua", who joined the "ECHO - Urban Photography Exhibition" at a later date.*/
INSERT INTO ARTIST VALUES('220-148','Photography','Hua','Shen','shenhua1000@gmail.com','CHN','1993-10-04');
INSERT INTO ARTWORK VALUES('148017','Milky Way','Photography','2022','Photorealism','510000','220-148');
INSERT INTO ARTWORK VALUES('148005','Jingdezhen','Photography','2020','Photorealism','430000','220-148');
INSERT INTO COLLABORATION VALUES('220-148','109810','1100621220163','2021-10-02');

```

訊息

(1 個資料列受到影響)

(1 個資料列受到影響)

(1 個資料列受到影響)

(1 個資料列受到影響)

202-095	Photograp...	Youta	Uaidoji	art.aidoji...	JPN	1992-01-17
202-100	Watercolour	Motonao	Gunichi	moto.gunic...	JPN	1993-04-03
202-265	Watercolour	Sakuru	Machii	cherrymimi...	JPN	1996-05-16
✓ 220-148	Photograp...	Hua	Shen	shenhua10...	CHN	1993-10-04
220-163	Photograp...	Jun-Wang	Li	dexter1225...	CHN	1994-12-25
236-026	Ink-Painting	Lara	Park	larra.luna@...	KOR	1989-10-02
236-099	Watercolour	Xiang	Han	bulu0427...	KOR	1990-04-27

(5) **EnZhu Christian church has a public welfare exhibition in the summer vacation "Beauty of Nature" held at "Taichung Tun District Art Center", and invited artists "Ya-Ting,Cheng" to participate. Insert the values into the tables,**

```

/*05*/
/*EnZhu Christian church has a public welfare exhibition in the summer vacation "Beauty of Nature" held at "Taichung Tun
and invited artists "Ya-Ting,Cheng" to participate. List the artist ID, name, email and nationality of the participating
INSERT INTO ARTIST VALUES('110-066','Watercolour ','Ya-Ting','Cheng','y.ting960288@gmail.com','TWN','1996-02-28');
INSERT INTO ARTWORK VALUES('066027','Starry sky of Alishan','Watercolour','2022','Illustration','373000','110-066');
INSERT INTO ARTWORK VALUES('066019','twinkle Twinkle Little Star','Watercolour','2018','Illustration','155000','110-066')
INSERT INTO ORANIZER VALUES('42540019','EnZhu Christian church','Christian church','Mary Huang','mary.huang@ezhu1979.com')
INSERT INTO SITES VALUES('TC-004','Taichung Tun District Art Center','No.201, Daxing Rd.','Taiping Dist , Taichung City')
INSERT INTO EXHIBITION VALUES('110068','Beauty of Nature - Public Welfare Exhibition','2022-07-09','2022-08-25','336','Pu
INSERT INTO COLLABORATION VALUES('110-066','110068','1110407110066','2022-04-07');
INSERT INTO COLLABORATION VALUES('110-167','110068','1110330110167','2022-03-30');
INSERT INTO COLLABORATION VALUES('110-268','110068','1100621220163','2022-03-25');
INSERT INTO COLLABORATION VALUES('236-026','110068','1110501236026','2022-05-01');
INSERT INTO COLLABORATION VALUES('403-432','110068','1110122403432','2022-01-22');
SELECT ARTIST.AST_ID,AST_FNAME,AST_LNAME, AST_EMAIL,AST_NATION_ISO
from COLLABORATION JOIN EXHIBITION ON COLLABORATION EXB_NUM = EXHIBITION EXB_NUM JOIN ARTIST ON COLLABORATION AST_ID = AR
WHERE EXHIBITION EXB_NUM = '110068' /*part01,step.2*/

```

(1 個資料列受到影響)

(1 個資料列受到影響)

→then list the artist ID, name, email and nationality of the participating artists.

```

/*05*/
/*EnZhu Christian church has a public welfare exhibition in the summer vacation "Beauty of Nature" held at "Taichung Tu
and invited artists "Ya-Ting,Cheng" to participate. List the artist ID, name, email and nationality of the participatin
INSERT INTO ARTIST VALUES('110-066','Watercolour ','Ya-Ting','Cheng','y.ting960288@gmail.com','TWN','1996-02-28');
INSERT INTO ARTWORK VALUES('066027','Starry sky of Alishan','Watercolour','2022','Illustration','373000','110-066');
INSERT INTO ARTWORK VALUES('066019','twinkle Twinkle Little Star','Watercolour','2018','Illustration','155000','110-066')
INSERT INTO ORANIZER VALUES('42540019','EnZhu Christian church','Christian church','Mary Huang','mary.huang@ezhu1979.co
INSERT INTO SITES VALUES('TC-004','Taichung Tun District Art Center','No.201, Daxing Rd.','Taiping Dist , Taichung Cit
INSERT INTO EXHIBITION VALUES('110068','Beauty of Nature - Public Welfare Exhibition','2022-07-09','2022-08-25','336','
INSERT INTO COLLABORATION VALUES('110-066','110068','1110407110066','2022-04-07');
INSERT INTO COLLABORATION VALUES('110-167','110068','1110330110167','2022-03-30');
INSERT INTO COLLABORATION VALUES('110-268','110068','1100621220163','2022-03-25');
INSERT INTO COLLABORATION VALUES('236-026','110068','1110501236026','2022-05-01');
INSERT INTO COLLABORATION VALUES('403-432','110068','1110122403432','2022-01-22');
SELECT ARTIST.AST_ID,AST_FNAME,AST_LNAME, AST_EMAIL,AST_NATION_ISO
from COLLABORATION JOIN EXHIBITION ON COLLABORATION EXB_NUM = EXHIBITION EXB_NUM JOIN ARTIST ON COLLABORATION AST_ID =
WHERE EXHIBITION EXB_NUM = '110068' /*part01,step.2*/

```

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結果 訊息

	AST_ID	AST_FNAME	AST_LNAME	AST_EMAIL	AST_NATION_ISO
1	110-066	Ya-Ting	Cheng	y.ting960288@gmail.com	TWN
2	110-167	Oliver	Tsai	Oliver09372@yahoo.com.tw	TWN
3	110-268	Ting	Fang	tinnna0813@gmail.com	TWN
4	236-026	Lara	Park	larra.luna@naver.com	KOR
5	403-432	Marie	Martin	mmmywe96@outlook.com	FRA

(6) UPDATE the EXHIBITION after 2022-01-01 due to the epidemic. The time of each exhibition is changed from 8 hours a day to 7 hours. Perform action at "part01",and then show up.

part01: step01. List out all exhibition after 2022.

step02. Perform action05. (To add the exhibition "110068")

step03. Perform action06 to lookout the added data.

step04. To update the data to changed from 8 hours a day to 7 hours.

(For the exhibition after 2022-01-01)

step05. Lookup the result.

```
/*06*/
/*UPDATE the EXHIBITION after 2022-01-01 due to the epidemic,
The time of each exhibition is changed from 8 hours a day to 7 hours.
Perform action at "part01",and then show up */
UPDATE EXHIBITION
SET EXB_TOT_HRS= (SELECT DATEDIFF(DAY, EXB_ST_DATE, EXB_ED_DATE)*7)
WHERE EXB_ST_DATE > '2022-01-01' /*part01,step.4*/

SELECT *
FROM EXHIBITION
WHERE EXB_ST_DATE > '2022-01-01' /*part01,step.1*//*part01,step.3*//*part01,step.5*/
```

EXB_NUM	EXB_NAME	EXB_ST_DATE	EXB_ED_DATE	EXB_TOT_HRS	EXB_TYPE	OGR_ID	SITE_NUM
1	110002	International Landscape Gallery	2022-01-08	2022-03-13	448	Thematic Exhibition	10241042 KH-010
2	110053	Local Art Co-Creation	2022-04-02	2022-05-22	350	Special Exhibition	15924340 TP-003
3	110068	Beauty of Nature - Public Welfare Exhibition	2022-07-09	2022-08-25	329	Public Welfare Exhibition	42540019 TC-004

(7) List the average value of each artworks exhibited by Taiwanese artists during this period, Calculate the total value of each artist's paintings and divide by the number of artworks.

```
/*07*/
/*List the average value of each artworks exhibited by Taiwanese artists during this period*/
SELECT ARTIST.AST_ID, ART_FNAME, ART_LNAME, (SUM(WORK_VALUE)/COUNT(DISTINCT WORK_NUM))AS 'average value'
FROM ARTWORK JOIN ARTIST ON ARTWORK.AST_ID = ARTIST.AST_ID
where ART_NATION_ISO= 'TWN'
GROUP BY ARTIST.AST_ID, ART_FNAME, ART_LNAME;
```

AST_ID	AST_FNAME	AST_LNAME	average value
1	110-015	Xing Liu	261000
2	110-066	Ya-Ting Cheng	264000
3	110-167	Oliver Tsai	169000
4	110-268	Ting Fang	156000
5	110-281	Wen-Sin Lin	250000
6	110-290	Mindy Xia	250500
7	110-732	Guei-Yu Lai	146000

- (8) Find the organizer who had plane the exhibition in the second half of 2021, find out if the start date of the exhibition is between "2021-07-01" and "2022-01-01". Demonstrate ORANIZER with subquery.

```

/*08*/
/*Find the organizer who had plane the exhibition in the second half of 2021*/
SELECT OGR_ID, OGR_TITLE, OGR_CONTPER_NAME, OGR_EMAIL, OGR_NUM
FROM ORANIZER
WHERE EXISTS
(SELECT *
FROM EXHIBITION
WHERE EXHIBITION.OGR_ID = ORANIZER.OGR_ID
AND (EXB_ST_DATE BETWEEN '2021-07-01' AND '2022-01-01'))

```

	OGR_ID	OGR_TITLE	OGR_CONTPER_NAME	OGR_EMAIL	OGR_NUM
1	15924340	Shengeng Wunyi Co., Ltd.	Adam Wang	service@shengeng.com	+886-2-1234-0781
2	18400456	I-Create Studio	Kevin Yeh	syner@icreate.com	+886-7-678-2110
3	A230142553	Wen-Sin, Lin	NULL	stella0512@gmail.com	+886-934-467-241

- (9) I-Create Studio is planning to organize a watercolour short term exhibition, need to contact all artists with watercolor works. List the artist with watercolor works, ID, name and contact email, and then add EXHIBITION information and COLLABORATION link. one last execution. ORANIZER is an existing data.

```

/*09*/
/*I-Create Studio is planning to organize a watercolor short term exhibition,
need to contact all artists with watercolor works.*/
SELECT AST_ID, AST_FNAME, AST_LNAME, AST_EMAIL
FROM ARTIST
WHERE AST_ID IN (SELECT AST_ID
FROM ARTWORK WHERE WORK_TYPE = 'Watercolour')/*go on 05 first!!*/
/*-----*/
INSERT INTO EXHIBITION VALUES('110074', 'Unfinished Colourful time', '2022-10-01', '2022-10-02', '16', 'Special Exhibi
INSERT INTO COLLABORATION VALUES('110-015', '110074', '1110605110015', '2022-06-05');
INSERT INTO COLLABORATION VALUES('110-066', '110074', '1110610110066', '2022-06-10');
INSERT INTO COLLABORATION VALUES('110-268', '110074', '1110620110268', '2022-06-20');
INSERT INTO COLLABORATION VALUES('202-265', '110074', '1110531202265', '2022-05-31');
INSERT INTO COLLABORATION VALUES('236-099', '110074', '1110601236099', '2022-06-01');
/*-----*/
SELECT *
FROM EXHIBITION;

```

	AST_ID	AST_FNAME	AST_LNAME	AST_EMAIL
1	110-015	Xing	Liu	mete1998@gmail.com
2	110-066	Ya-Ting	Cheng	y.ting960288@gmail.com
3	110-268	Ting	Fang	tinna0813@gmail.com
4	202-265	Sakuru	Machii	cherrymimi@hotmail.com
5	236-099	Xiang	Han	bulu0427@naver.com

```

/*09*/
/*I-Create Studio is planning to organize a watercolor short term exhibition,
need to contact all artists with watercolor works.*/
SELECT AST_ID, AST_FNAME, AST_LNAME, AST_EMAIL
FROM ARTIST
WHERE AST_ID IN (SELECT AST_ID
FROM ARTWORK WHERE WORK_TYPE = 'Watercolour')/*go on 05 first!!*/
/*-----*/
INSERT INTO EXHIBITION VALUES('110074', 'Unfinished Colourful time', '2022-10-01', '2022-10-02', '16', 'Special Exhibition',
INSERT INTO COLLABORATION VALUES('110-015', '110074', '1110605110015', '2022-06-05');
INSERT INTO COLLABORATION VALUES('110-066', '110074', '1110610110066', '2022-06-10');
INSERT INTO COLLABORATION VALUES('110-268', '110074', '1110620110268', '2022-06-20');
INSERT INTO COLLABORATION VALUES('202-265', '110074', '1110531202265', '2022-05-31');
INSERT INTO COLLABORATION VALUES('236-099', '110074', '1110601236099', '2022-06-01');
/*-----*/
SELECT *
FROM EXHIBITION;

```



```

/*09*/
/*I-Create Studio is planning to organize a watercolor short term exhibition,
need to contact all artists with watercolor works.*/
SELECT AST_ID, AST_FNAME, AST_LNAME, AST_EMAIL
FROM ARTIST
WHERE AST_ID IN (SELECT AST_ID
FROM ARTWORK WHERE WORK_TYPE = 'Watercolour')/*go on 05 first!!*/
/*-----*/
INSERT INTO EXHIBITION VALUES('110074','Unfinished Colourful time','2022-10-01','2022-10-02','16','Special Exhibition','1
INSERT INTO COLLABORATION VALUES('110-015','110074','1110605110015','2022-06-05');
INSERT INTO COLLABORATION VALUES('110-066','110074','1110610110066','2022-06-10');
INSERT INTO COLLABORATION VALUES('110-268','110074','1110620110268','2022-06-20');
INSERT INTO COLLABORATION VALUES('202-265','110074','1110531202265','2022-05-31');
INSERT INTO COLLABORATION VALUES('236-099','110074','1110601236099','2022-06-01');
/*-----*/
SELECT *
FROM EXHIBITION;

```

EXB_NUM	EXB_NAME	EXB_ST_DATE	EXB_ED_DATE	EXB_TOT_HRS	EXB_TYPE	OGR_ID	SITE_NUM
1	109231	Amusement Waltz-Sakuru Machii Solo Exhibition	2021-03-27	2021-04-18	184	Solo Exhibition	15273909 TP-012
2	109478	Listen to Yourself - Contemporary Art Exhibition	2021-08-21	2021-09-19	240	Thematic Exhibition	18400456 KH-010
3	109729	Digitalk - Wen&Mindys Co-Creation	2021-09-18	2021-10-03	128	Group Exhibition	A230142553 TP-006
4	109810	ECHO - Urban Photography Exhibition	2021-11-27	2022-01-09	352	Thematic Exhibition	15924340 TP-003
5	110002	International Landscape Gallery	2022-01-08	2022-03-13	448	Thematic Exhibition	10241042 KH-010
6	110053	Local Art Co-Creation	2022-04-02	2022-05-22	350	Special Exhibition	15924340 TP-003
7	110068	Beauty of Nature - Public Welfare Exhibition	2022-07-09	2022-08-25	329	Public Welfare Exhibition	42540019 TC-004
8	110074	Unfinished Colourful time	2022-10-01	2022-10-02	16	Special Exhibition	18400456 TP-006

- (10) Count the total artworks are there in the table currently.

```

/*10*/
/*Count the total artworks are there in the table currently.*/
SELECT COUNT(DISTINCT WORK_NUM) AS "COUNT ARTWORK"
FROM ARTWORK;

```

COUNT ARTWORK
39

- (11) Count the how many artists join each exhibition in the table currently, then descending order by the number of the joining artists.

```

/*11*/
/*Count the how many artists join each exhibition in the table currently.*/
SELECT COLLABORATION_EXB_NUM, EXB_NAME, EXB_ST_DATE, EXB_TYPE, COUNT(DISTINCT AST_ID) AS 'How much artists join.'
FROM COLLABORATION JOIN EXHIBITION ON COLLABORATION_EXB_NUM = EXHIBITION_EXB_NUM
GROUP BY COLLABORATION_EXB_NUM, EXB_NAME, EXB_ST_DATE, EXB_TYPE
ORDER BY 'How much artists join.' DESC;

```

EXB_NUM	EXB_NAME	EXB_ST_DATE	EXB_TYPE	How much artists join.
1	110068	Beauty of Nature - Public Welfare Exhibition	2022-07-09	Public Welfare Exhibition 5
2	110074	Unfinished Colourful time	2022-10-01	Special Exhibition 5
3	110053	Local Art Co-Creation	2022-04-02	Special Exhibition 4
4	109478	Listen to Yourself - Contemporary Art Exhibition	2021-08-21	Thematic Exhibition 4
5	109810	ECHO - Urban Photography Exhibition	2021-11-27	Thematic Exhibition 4
6	110002	International Landscape Gallery	2022-01-08	Thematic Exhibition 3
7	109729	Digitalk - Wen&Mindys Co-Creation	2021-09-18	Group Exhibition 2
8	109231	Amusement Waltz-Sakuru Machii Solo Exhibition	2021-03-27	Solo Exhibition 1

(12) List all artists who had joint the exhibition in Zhong Zhen Distric or Xinyi District.

```
/*12*/
/*List all artists who had joint the exhibition in Zhong Zhen Distric or Xinyi District.*/
SELECT DISTINCT ARTIST.AST_ID, AST_FNAME, AST_LNAME, AST_NATION_ISO
FROM COLLABORATION JOIN ARTIST ON COLLABORATION.AST_ID = ARTIST.AST_ID
JOIN EXHIBITION ON COLLABORATION.EXB_NUM = EXHIBITION.EXB_NUM
WHERE EXHIBITION.SITE_NUM IN
(SELECT SITE_NUM FROM SITES WHERE SITE_DIST_CITY LIKE 'Zhong Zhen District%' OR SITE_DIST_CITY LIKE 'Xinyi District%')
ORDER BY ARTIST.AST_ID DESC;
```

	AST_ID	AST_FNAME	AST_LNAME	AST_NATION_ISO
1	236-493	Kim	Jin	KOR
2	236-099	Xiang	Han	KOR
3	220-163	Jun-Wang	Li	CHN
4	220-148	Hua	Shen	CHN
5	202-265	Sakuru	Machii	JPN
6	202-095	Youta	Daidoji	JPN
7	110-732	Guei-Yu	Lai	TWN
8	110-290	Mindy	Xia	TWN
9	110-281	Wen-Sin	Lin	TWN
10	110-268	Ting	Fang	TWN
11	110-167	Oliver	Tsai	TWN
12	110-066	Ya-Ting	Cheng	TWN
13	110-015	Xing	Liu	TWN

(13) Find artists with works in the category 'Landscape' that are worth more than the overall average. Find out all the artwork value more than the average, then joined by ARTIST.

```
/*13*/
/*Find artists with works in the category 'Landscape' that are worth more than the overall average.*/
SELECT DISTINCT AST_FNAME, AST_SPECIALTY, AST_EMAIL, AST_NATION_ISO
FROM ARTIST JOIN (SELECT *
FROM ARTWORK
WHERE WORK_VALUE >
(SELECT AVG(WORK_VALUE)
FROM ARTWORK)) AS WORK ON ARTIST.AST_ID = WORK.AST_ID
WHERE WORK_CATEGORY = 'Landscape';
```

	AST_FNAME	AST_SPECIALTY	AST_EMAIL	AST_NATION_ISO
1	Lara	Ink-Painting	larra.luna@naver.com	KOR
2	Louis	Oil-Painting	lou.mill9090@gmail.com	USA
3	Marie	Oil-Painting	mmywe96@outlook.com	FRA

Artist to Artwork

110-015	Watercolour	Xing	Liu	mete1998@gmail.com	TWN	1998-02-18	15014	In The Mirror	Watercolour	2022	still-life	261000	110-015
236-026	Ink-Painting	Lara	Park	larra.luna@naver.com	KOR	1989-10-02	26020	Gwaneumsa Trai	Ink-Painting	2020	Landscape	597000	236-026
236-026	Ink-Painting	Lara	Park	larra.luna@naver.com	KOR	1989-10-02	26026	Hallasan	Ink-Painting	2019	Landscape	580000	236-026
236-026	Ink-Painting	Lara	Park	larra.luna@naver.com	KOR	1989-10-02	26046	Dagelet	Ink-Painting	2021	Landscape	651000	236-026
202-095	Photography	Youta	Daidoji	art.daidoji@gmail.com	JPN	1992-01-17	95023	May 24th, 2018	Photography	2018	Photorealism	178000	202-095
202-095	Photography	Youta	Daidoji	art.daidoji@gmail.com	JPN	1992-01-17	95031	December 25th, 2021	Photography	2021	Photorealism	290000	202-095
202-095	Photography	Youta	Daidoji	art.daidoji@gmail.com	JPN	1992-01-17	95044	July 13th, 2021	Photography	2021	Photorealism	318000	202-095
236-099	Watercolour	Xiang	Han	bulu0427@naver.com	KOR	1990-04-27	99025	06:21am.	Watercolour	2020	still-life	241000	236-099
236-099	Watercolour	Xiang	Han	bulu0427@naver.com	KOR	1990-04-27	99101	23:16pm.	Watercolour	2022	Portrait	258000	236-099
401-110	Oil-Painting	Emliy	Brown	e.brown95s@gmail.com	USA	1995-12-16	110004	Petit	Sketch	2021	Portrait	NULL	401-110
401-110	Oil-Painting	Emliy	Brown	e.brown95s@gmail.com	USA	1995-12-16	110338	Kendall	Sketch	2018	Portrait	NULL	401-110
401-148	Oil-Painting	Louis	Miller	lou.mil9090@gmail.com	USA	1990-09-10	148014	Psychedelic Wor	Oil-Painting	2020	Landscape	632000	401-148
401-148	Oil-Painting	Louis	Miller	lou.mil9090@gmail.com	USA	1990-09-10	148041	The Pinaster	Sketch	2021	Landscape	617000	401-148
220-163	Photography	Jun-Wang	Li	dexter1225@sina.com	CHN	1994-12-25	163004	Night Sky	Photography	2021	Photorealism	419000	220-163
220-163	Photography	Jun-Wang	Li	dexter1225@sina.com	CHN	1994-12-25	163012	Corner of the City	Photography	2021	Photorealism	182000	220-163
220-163	Photography	Jun-Wang	Li	dexter1225@sina.com	CHN	1994-12-25	163027	Crossroads	Photography	2022	Photorealism	193000	220-163
110-167	Oil-Painting	Oliver	Tsai	Oliver09372@yahoo.com.tw	TWN	1991-03-28	167017	thoo-kat-tshu	Oil-Painting	2018	Illustration	167000	110-167
110-167	Oil-Painting	Oliver	Tsai	Oliver09372@yahoo.com.tw	TWN	1991-03-28	167032	am-tng	Oil-Painting	2022	Comics	171000	110-167
201-238	Collage	Ruri	Efuji	keiku2888@gmail.com	JPN	1996-02-28	238005	Merry-Go-Round	Sketch	2019	Abstract	145000	201-238
201-238	Collage	Ruri	Efuji	keiku2888@gmail.com	JPN	1996-02-28	238010	Hide-And-Seek	Collage	2022	Abstract	154000	201-238
202-265	Watercolour	Sakuru	Machii	cherrymimi@hotmail.com	JPN	1996-05-16	265320	ReadMe	Watercolour	2018	Illustration	NULL	202-265
202-265	Watercolour	Sakuru	Machii	cherrymimi@hotmail.com	JPN	1996-05-16	265640	Secret Garden	Watercolour	2020	Illustration	NULL	202-265
202-265	Watercolour	Sakuru	Machii	cherrymimi@hotmail.com	JPN	1996-05-16	265810	Dreamer	Sketch	2021	Illustration	NULL	202-265
110-268	Watercolour	Ting	Fang	tinnna0813@gmail.com	TWN	1997-08-13	268005	Reincarnation	Watercolour	2022	Abstract	162000	110-268
110-268	Watercolour	Ting	Fang	tinnna0813@gmail.com	TWN	1997-08-13	268026	After-School	Watercolour	2021	Abstract	150000	110-268
110-281	Digital-Art	Wen-Sin	Lin	stella0512@gmail.com	TWN	1995-05-12	281021	Focus	Digital-Art	2021	Comics	249000	110-281
110-281	Digital-Art	Wen-Sin	Lin	stella0512@gmail.com	TWN	1995-05-12	281054	Notification	Digital-Art	2022	Abstract	251000	110-281
110-290	Digital-Art	Mindy	Xia	mindyx0x0@gmail.com	TWN	1995-01-30	290008	Error 404	Digital-Art	2020	Comics	247000	110-290
110-290	Digital-Art	Mindy	Xia	mindyx0x0@gmail.com	TWN	1995-01-30	290019	Programming	Digital-Art	2022	Comics	254000	110-290
201-294	Digital-Art	Ren	Kaise	rensyoud@gmail.com	JPN	1999-01-29	294012	Stella no Za	Digital-Art	2022	Abstract	99000	201-294
403-432	Oil-Painting	Marie	Martin	mmmywe96@outlook.com	FRA	1988-03-03	432005	Ocean	Oil-Painting	2018	Landscape	NULL	403-432
403-432	Oil-Painting	Marie	Martin	mmmywe96@outlook.com	FRA	1988-03-03	432018	Shadow	Oil-Painting	2020	Landscape	615000	403-432
236-493	Photography	Kim	Jin	kmjnkjmn555@gmail.com	KOR	1992-05-20	493043	The Horizon The	Photography	2020	Photorealism	373000	236-493
236-493	Photography	Kim	Jin	kmjnkjmn555@gmail.com	KOR	1992-05-20	493053	The Horizon The	Photography	2022	Photorealism	335000	236-493
110-732	Digital-Art	Guei-Yu	Lai	fishforwork@icloud.com	TWN	2000-11-16	732003		Digital-Art	2022	Abstract	146000	110-732

Artist to COLLABORATION

202-265	Watercolour	Sakuru	Machii	mi@hotmail.com	JPN	1996-05-16	202-265	109231	1090915202265	2020/9/15
401-110	Oil-Painting	Emliy	Brown	195s@gmail.com	USA	1995-12-16	401-110	109478	1091002401110	2020/10/2
236-099	Watercolour	Xiang	Han	1427@naver.com	KOR	1990-04-27	236-099	109478	1091224236099	2020/12/24
201-294	Digital-Art	Ren	Kaise	syoun@gmail.com	JPN	1999-01-29	201-294	109478	1100501201294	2021/5/1
201-238	Collage	Ruri	Efuji	1888@gmail.com	JPN	1996-02-28	201-238	109478	1100524201238	2021/5/24
110-290	Digital-Art	Mindy	Xiao	10x0@gmail.com	TWN	1995-01-30	110-290	109729	1100605110290	2021/6/5
236-493	Photography	Kim	Jin	1555@gmail.com	KOR	1992-05-20	236-493	109810	1100618236493	2021/6/18
220-163	Photography	Jun-Wang	Li	1225@sina.com	CHN	1994-12-25	220-163	109810	1100621220163	2021/6/21
202-095	Photography	Youta	Daidoji	1idoji@gmail.com	JPN	1992-01-17	202-095	109810	1100724202095	2021/7/24
110-281	Digital-Art	Wen-Sin	Lin	1512@gmail.com	TWN	1995-05-12	110-281	109729	1100730110281	2021/7/30
401-148	Oil-Painting	Louis	Miller	1090@gmail.com	USA	1990-09-10	401-148	110002	1101027401148	2021/10/27
403-432	Oil-Painting	Marie	Martin	196@outlook.com	FRA	1988-03-03	403-432	110002	1101109403432	2021/11/9
110-167	Oil-Painting	Oliver	Tsai	12@yahoo.com.tw	TWN	1991-03-28	110-167	110053	1101130110167	2021/11/30
110-732	Digital-Art	Guei-Yu	Lai	1vork@icloud.com	TWN	2000-11-16	110-732	110053	1101204110732	2021/12/4
236-026	Ink-Painting	Lara	Park	1luna@naver.com	KOR	1989-10-02	236-026	110002	1101205236026	2021/12/5
110-268	Watercolour	Ting	Fang	1813@gmail.com	TWN	1997-08-13	110-268	110053	1101221110268	2021/12/21
110-015	Watercolour	Xing	Liu	1998@gmail.com	TWN	1998-02-18	110-015	110053	1110103110015	2022/1/3

Exhibition to Collaboration

110053	Art Co-Creation	2022-04-02	2022-05-22	408	Special Exhibition	15924340	TP-003	110-015	110053	1110103110015	2022/1/3
110053	Art Co-Creation	2022-04-02	2022-05-22	408	Special Exhibition	15924340	TP-003	110-167	110053	1101130110167	2021/11/30
110053	Art Co-Creation	2022-04-02	2022-05-22	408	Special Exhibition	15924340	TP-003	110-268	110053	1101221110268	2021/12/21
110053	Art Co-Creation	2022-04-02	2022-05-22	408	Special Exhibition	15924340	TP-003	110-732	110053	1101204110732	2021/12/4
110002	andscape Gallery	2022-01-08	2022-03-13	520	ematic Exhibition	10241042	KH-010	236-026	110002	1101205236026	2021/12/5
110002	andscape Gallery	2022-01-08	2022-03-13	520	ematic Exhibition	10241042	KH-010	403-432	110002	1101109403432	2021/11/9
110002	andscape Gallery	2022-01-08	2022-03-13	520	ematic Exhibition	10241042	KH-010	401-148	110002	1101027401148	2021/10/27
109810	graphy Exhibition	2021-11-27	2022-01-09	352	ematic Exhibition	15924340	TP-003	202-095	109810	1100724202095	2021/7/24
109810	graphy Exhibition	2021-11-27	2022-01-09	352	ematic Exhibition	15924340	TP-003	220-163	109810	1100621220163	2021/6/21
109810	graphy Exhibition	2021-11-27	2022-01-09	352	ematic Exhibition	15924340	TP-003	236-493	109810	1100618236493	2021/6/18
109729	ndys Co-Creation	2021-09-18	2021-10-03	128	Group Exhibition	A230142553	TP-006	110-281	109729	1100730110281	2021/7/30
109729	ndys Co-Creation	2021-09-18	2021-10-03	128	Group Exhibition	A230142553	TP-006	110-290	109729	1100605110290	2021/6/5
109478	ary Art Exhibition	2021-08-21	2021-09-19	240	ematic Exhibition	18400456	KH-010	201-238	109478	1100524201238	2021/5/24
109478	ary Art Exhibition	2021-08-21	2021-09-19	240	ematic Exhibition	18400456	KH-010	201-294	109478	1100501201294	2021/5/1
109478	ary Art Exhibition	2021-08-21	2021-09-19	240	ematic Exhibition	18400456	KH-010	236-099	109478	1091224236099	2020/12/24
109478	ary Art Exhibition	2021-08-21	2021-09-19	240	ematic Exhibition	18400456	KH-010	401-110	109478	1091002401110	2020/10/2
109231	iii Solo Exhibition	2021-03-27	2021-04-18	184	Solo Exhibition	15273909	TP-012	202-265	109231	1090915202265	2020/9/15