

ArtGallery.

A database containing details of Artists, Artworks, Exhibits and Customers. These entities contain information about the artworks made by artists and the exhibit locations that these pieces have been displayed at. It also contains information about the customers who have brought these artworks including the transaction details.

- Asma LNU and Melinda Vigh.



Type of Data used:

1) Did you use real data (yes or no), which tables and attributes are covered with such a real data set?

Yes, we've used read data for the following list of tables and attributes that contain real data:

- Artist (artistName)
- Artwork (artTitle, price) - some prices were real data and some were generated via various data generator websites
- Exhibit (exhibitName, address)

2) Did you use a programming language to generate random data, which tables and attributes are covered with such random data?

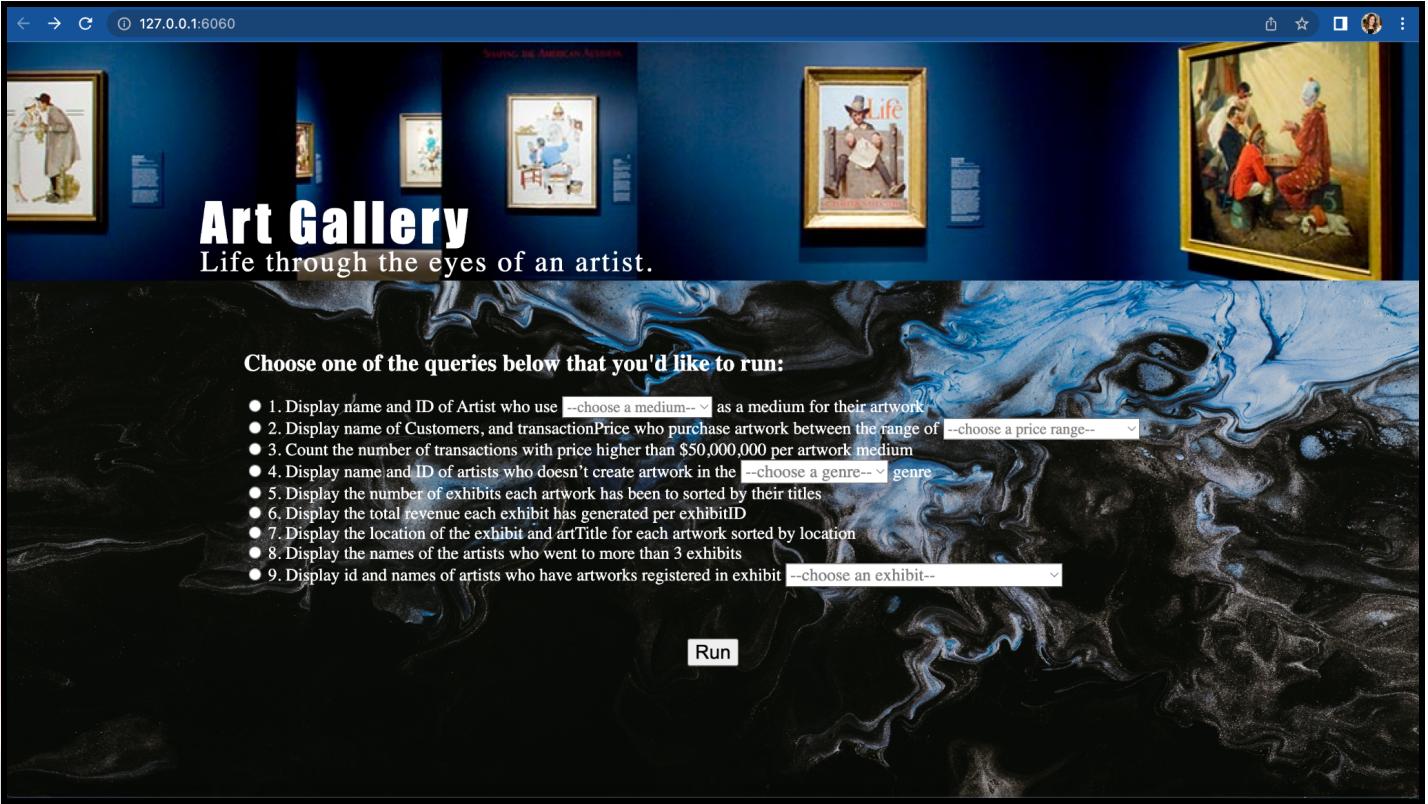
No programming language was used to generate data, instead online data generator websites were used.

3) Did you use online tools to generate random data, which tables and attributes are covered with such a data set?

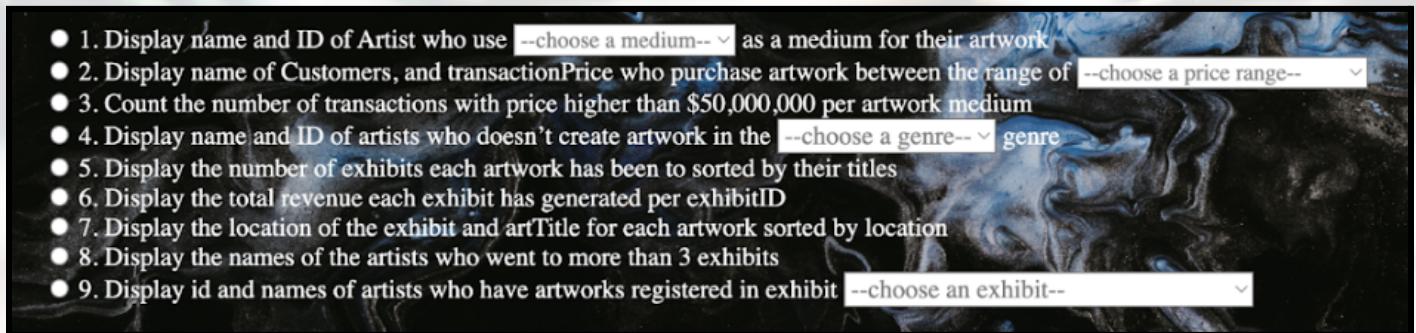
Online data generator websites and Microsoft Excel (for ID values) were used to help generate the made up data values for the following tables and attributes:

- Artist (artistID, email, phoneNr, artistBio)
- Artwork (artID, medium, size, price, genre, price) - some prices were real data and some were generated via various data generator websites
- Exhibit (exhibitID, startDate, endDate)
- Customer (customerID, customerAddress, customerPhone, customerEmail)
- SellTo (transactionQuantity, transactionPrice, transactionDate) - some transactionPrice values were real values and some website generated)

Developed Web-page:



Query Menu:



Query#1:

```
if query_data['onechoice'] == 'query 1':  
    print(query_data['mediumList'])  
    return display_function(f"""SELECT DISTINCT A.artistID, A.artistName  
        FROM Artist AS A, Artwork AS R  
        WHERE A.artistID=R.artistID AND R.medium={query_data['mediumList']}""")
```

R.medium =

Query#1 Output:

artistID	artistName
1000026	Melinda Vigh
1000044	Andr Dunoyer de Segonzac
1000045	Andre Derain
1000046	Anne Seymour Damer
1000047	Anthony van Dyck
1000048	Antoine Masson
1000070	Charles Bloud
1000130	Girolamo Scarselli
1000136	Hans Heinrich Meyer
1000139	Heinz Warneke
1000140	Henri Matisse
1000163	Jan Harmensz. Muller
1000190	Josef Albers
1000192	Juan Gris
1000195	Jules-Paul Brateau
1000196	Kantharos Group
1000197	Katsukawa Shun'ei
1000198	Katsukawa Shunch
1000199	Katsushika Hokusai
1000200	Katsushika Taito II
1000204	Lambayeque
1000205	Lambeth Potteries
1000206	Lan Ying
1000207	Leafless Group
1000252	Paul Manship
1000268	Ralph Earl
1000269	Randolph Rogers
1000270	Raymond Duchamp-Villon
1000272	Redwood Glass Works
1000280	Robert Genin
1000281	Robert Matthew Sully
1000282	Robert Nanteuil
1000283	Rockwell Kent
1000284	Rouen Potteries
1000285	Royal Copenhagen Porcelain Company
1000286	Sabatino de Angelis
1000293	Sesson Shukei
1000296	Songye
1000321	Vicke Lindstrand
1000324	Walter Shirlaw

Query#2:

```
elif query_data['onechoice'] == 'queery 2':  
    #print(query_data['priceRanges'])  
    return display_function(f"""SELECT C.customerName, S.transactionPrice  
        FROM Customer AS C, SellTo AS S  
        WHERE C.customerID = S.customerID AND {query_data['priceRanges']}""")
```

S.transactionPrice range between:

Query#2 Output:

customerName	transactionPrice
Malcolm Wells	51003000
Vickie Thornton	44810000
Ollie Jefferson	51003000
Whitney Coleman	58879000
Ted Garner	54234000
Caroline Morton	56000000
Roy Hardy	46951000
Alfredo Mann	41641000
Stewart Bowen	40334000
Carlos Tran	64549000
Domingo Snyder	48514000
Daryl Schaefer	53972000
Alisha Beals	49274000
Leeann Barksdale	64549000
Ciera Langlois	46153000
Kelley Larsen	48350000
Moises Amaya	55353000
Yi Cromer	41641000
Camilla Richter	48228000
Mellie Ojeda	58278000

Query#3:

```
elif query_data['onechoice'] == 'queqry_3':
    return display_function(f"""
        SELECT R.medium, COUNT(S.transactionQuantity) AS TotTrans
        FROM Artwork AS R, Exhibit AS E, SellTo AS S, Customer AS C
        WHERE R.exhibitID = E.exhibitID AND E.exhibitID = S.exhibitID AND S.customerID = C.customerID
        AND C.customerID=S.customerID AND S.transactionPrice >= 20000000
        GROUP BY R.medium""")
```

Query#3 Output:

medium TotTrans	
oil paint	382
pastels	535
ink	354
watercolor	398
digital art	261
colored pencils	419
charcoal	514
mixed media	374
acrylic paint	550

Query#4:

```
elif query_data['onechoice'] == 'queery_4':  
    print(query_data['genraRange'])  
    return display_function(f'''SELECT artistName, artistID  
        FROM Artist  
        WHERE artistID NOT IN (SELECT artistID  
            FROM Artwork  
            WHERE genre = '{query_data['genraRange']}'}')'''")
```

A.genre =

Query#4 Output:

artistName	artistID
Vincent van Gogh	1000001
Amedeo Modigliani	1000002
Andy Warhol	1000003
Barnett Newman	1000004
Claude Monet	1000005
Edvard Munch	1000006
Francis Bacon	1000007
Gustav Klimt	1000008
Hans Holbein	1000009
Jackson Pollock	1000010
Jasper Johns	1000011
Kazimir Malevich	1000012
Leonardo Da Vinci	1000013
Mark Rothko	1000014
Pablo Picasso	1000015
Paul Cézanne	1000016
Peter Paul Rubens	1000017
Pierre-Auguste Renoir	1000018
Pontormo	1000019
Qi Baishi	1000020
Thomas Eakins	1000021
Titian	1000022
Wang Meng	1000023
Willem de Kooning	1000024
Raelyn Mendoza	1000027
Andre Derain	1000045
Anne Seymour Damer	1000046
Anthony van Dyck	1000047
Antoine Masson	1000048
Antonio Frasconi	1000049
Antonio Maria Esquivel	1000050
Arthur Devis	1000051
Asante	1000052
Auguste Herbin	1000053
Auguste Rodin	1000054
Avon Pottery	1000055
Azechi Umetaro	1000056
Charles Fran u00e7ois Daubigny	1000071
Charles Franois Daubigny	1000072
Charles Georges Dufresne	1000073
Charles Joseph Beauverie	1000074

Charles Parroccl	1000075
Charles Robert Leslie	1000076
Chelsea Porcelain Factory	1000077
Chicago Painter	1000078
Chim	1000079
Chimbote	1000080
Chloe Potland	1000081
Cholula	1000083
Chup Ueduardo	1000084
Circle of Federico Zuccaro	1000085
Claude Mellan	1000086
Cocl	1000087
Constant Troyon	1000088
Constantin Brancusi	1000089
Grant Wood	1000133
Grieksche A Factory	1000134
Grieksche A Factory	1000134
Hanns Lautensack	1000135
Hans Heinrich Meyer	1000136
Hashiguchi Goy	1000137
Heinrich Aldegrever	1000138
Heinz Warneke	1000139
Horatio Greenough	1000147
Isaac Oliver	1000148
Isaac Robert Cruikshank	1000149
Ishikawa Toyonobu	1000150
Islamic	1000151
Isoda Koryusai	1000152
Ito Shinsui	1000153
Ivan Albright	1000154
Ixion Painter	1000155
J. de Frey	1000156
J. Marsden	1000157
Jacob Frisard	1000158
Jacob Matthias Schmutzer	1000159
James McNeill Whistler	1000160
James Peale	1000161
James Simpson	1000162
Jan Harmensz. Muller	1000163
Jan Saenredam	1000164
Jan Steen	1000165
Jan van Os	1000166
Jean Baptiste Camille Corot	1000167

Jean Baptiste Carpeaux	1000168
Jean Baptiste douard Detaille	1000169
Jean Charles Cazin	1000170
Jean Charlot	1000171
Jean Lon Grme	1000172
Jean Metzinger	1000173
Jean Myrtle MacLane	1000174
Jean Sala	1000175
Jean Sala	1000176
Jo Davidson	1000177
Johann Eusebius Loderer	1000178
Johann Gotthard von M u00f6ller	1000179
Johannes Lanoy	1000180
John Carroll	1000181
John Constable	1000182
John Frederick Peto	1000183
John Kirkhoffer	1000184
John Singleton Copley	1000185
John Skinner Prout	1000186
John Sutton	1000187
John Trumbull	1000188
John Vernon	1000189
Josef Albers	1000190
Joseph Dufour	1000191
Juan Gris	1000192
Jules Bastien-Lepage	1000193
Jules Dupr	1000194
Jules-Paul Brateau	1000195
Kanthalos Group	1000196
Katsukawa Shun'eい	1000197
Katsukawa Shunch	1000198
Katsushika Hokusai	1000199
Katsushika Taito II	1000200
Kawase Hasui	1000201
Kitagawa Utamaro	1000202
Kitao Shigemasa	1000203
Lambayeque	1000204
Lambeth Potteries	1000205
Lan Ying	1000206
Leafless Group	1000207
Leon Kroll	1000208
Leonard Wells Volk	1000209
Lorenzo Garbieri	1000210
Luca Ciamberlano	1000211
Lucas Emil Vorsterman	1000212
Luigi Rossini	1000213
Lyonel Feininger	1000214
Marc Chagall	1000215
Marco Marcola	1000216
Mario J. Korbel	1000217
Mark Rothko	1000218
Massimo Campigli	1000219
Master F. P.	1000220
Master of the Die	1000221
Mattinata Painter	1000222
Maurice Denis	1000223
Maurice Est	1000224
Max Beckmann	1000225
Meindert Hobbema	1000226
Meissen Porcelain Manufactory	1000227
Mennecy Factory	1000228
Michigan Painter	1000229
milie Charmy	1000230
Milton Avery	1000231
Moody Russell	1000232
Morris Kantor	1000233
Moustiers Potteries	1000234
Nagase Yoshir	1000235
Narcisse Virgile Diaz de la Pe	1000236
Nazca	1000237
Nicolaes de Bruyn	1000238
Nicolas Jansz. (Claes) Visscher	1000239
Nicolas Poussin	1000240
Nicolaus Ruggendas	1000241
Niderviller Pottery and Porcelain Factory	1000242
Nishimura Shigenaga	1000243
Oda Kazuma	1000244
Okumura Masanobu	1000245
Olerys Pottery Manufactory	1000246
Olga Chassaing	1000247
Oncji Kudshir	1000248
Orefors Glasbruk	1000249
Paolo Farinato	1000250
Paul Klee	1000251
Paul Manship	1000252
Paulus Potter	1000253

Penthesilea Painter	1000254
Percival	1000255
Permiliano	1000256
Perugia Painter	1000257
Philip Guston	1000258
Pierre Andrieu	1000259
Pierre Drevet	1000260
Pieter Jansz. Quast	1000261
Pieter Tanj	1000262
Plymouth Porcelain Factory	1000263
Porzellanmanufaktur Frankenthal	1000264
Quentin Massys	1000265
R. Pannett	1000266
Raku Ry	1000267
Ralph Earl	1000268
Randolph Rogers	1000269
Raymond Duchamp-Villon	1000270
Real Fabbrika della porcellana di Capodimonte	1000271
Redwood Glass Works	1000272
Reinier Zeeman	1000273
Rembrandt van Rijn	1000274
Richard Gibson	1000275
Richard Gurney	1000276
Saito Kiyoshi	1000288
Salvator Rosa	1000289
Samuel Lane	1000290
Schelte Adamsz. Bolswert	1000291
School of Myochin	1000292
Sesson Shukei	1000293
Sir Robert Ker Porter	1000294
Sir William Hamo Thornycroft	1000295
Songye	1000296
Staffordshire Potteries	1000297
Stanley William Hayter	1000298
Stuart Davis	1000299
Sugimura Jihei	1000300
Suzuki Harunobu	1000301
Tachibana Minko	1000302
Takahashi Hiroaki (Shotei)	1000303
Talavera de la Reina Potteries	1000304
The Orchard Painter	1000305
Thodore Rousseau	1000306
Thomas Parr	1000307
Tintoretto	1000308
Tiwanaku	1000309
Tlatilco	1000310
Torii Kiyomasu I	1000311
Torii Kiyonaga	1000312
Torii Kiyoshige	1000313
Torii Kotondo	1000314
Tsugouharu Foujita	1000315
Utagawa Kuniyoshi	1000316
Utagawa Toyokuni I	1000317
Vasily Kandinsky	1000318
Veraguas	1000319
Veuve Perrin Manufactory	1000320
Vicke Lindstrand	1000321
Wallace L. DeWolf	1000322
Walter E. Spradbery	1000323
Walter Shirlaw	1000324
Walter Stanley Paget	1000325
Watanabe Shozaburo	1000326
Wedgwood Manufactory	1000327
Willem van Mieris	1000328
William Adams	1000329
William Gropper	1000330
William John Thomson	1000331
William Merritt Chase	1000332
Winslow Homer	1000333
Wolf Traut	1000334
Worcester Royal Porcelain Company	1000335
Yamaguchi Gen	1000356
Zapotec	1000357

Query#5:

```
elif query_data['onechoice'] == 'queery 5':
    return display_function(f"""
        SELECT artTitle, COUNT(DISTINCT exhibitID) AS ExhibitCount
        FROM Artwork
        GROUP BY artTitle""")
```

Query#5 Output:

artTitle	ExhibitCount
A Beauty	1
A Beauty Walking	1
A Burgher of Calais (Jean d'Aire)	1
A Mother Feeding her Child (The Happy Mother)	1
A Mounted Officer	1
A Warrior in Full Armor in a Grotto	1
A Wheatfield with Cypresses	1
A Young Man Caressing the Young Hostess	1
A Young Woman in a Summer Shower	1
A Young Woman Watching Frogs	1
Abdiel	1
Abraham Bloemaert	1
Acrobate et jeune arlequin	1
Adele Bloch-Bauer II	1
Alice	1
Allegory of Agriculture	1
Allegory of Science	1
Alleyway Lights	1
Along the Beach, England	1
Altar Bell	1
American Gothic	1
Among the Redwoods	1
Amphora (Storage Jar)	3
An Allegory of Bologna	1
An Italian Comedy in Verona	1
Anacreon with the Infants Bacchus and Cupid	1
Ancient City, Nara	1
Andromeda	1
Anna's Light	1
Anne of Austria, Queen of France	1
Approaching Dusk on Furukawa Embankment (Kure iku Furukawazutsumi)	1
Arrangement in Flesh Color and Brown: Portrait of Arthur Jerome Eddy.	1
Articulated Dragon	1
Au Lapin Agile	1
Bacchanale with Putti	1
Bal du moulin de la Galette	1
Baptism	1
Barks Fleeing Before the Storm	1
Basket	1
Beaker Depicting Rows of Figures with Weapons and Band of Human Faces	1
Beauty Beneath a Willow Tree	1
Between the Acts	1
Black Fire I	1
Blackware Cup with Abstract Faces Carved in Panels	1
Blackware Incense Burner with Relief Depicting Felines	1
Blackware Jar in the Form of a Figure with Bound Arms and Legs	1
Blackware Jar in the Form of an Animal, possibly a Llama	1
Blackware Jar with Single Spout	1
Blackware Narrow Neck Jar with Shoulder Impressed with Birds	1
Blackware Plate	1
Blackware Stirrup Spout Vessel with a Relief Depicting Warriors with Raised Arms	1
Blinded by the Rays	1
Bonimenteur	1
Bottle	1
Bowl	2
Bowl Depicting Costumed Ritual Performers in Horizontal Row	1
Bowl Depicting Rows Containing Repeated Geometric Motifs	1
Bowl Depicting Rows of Spotted Birds	1
Bowl with Bold Black-on-White Diamond and Zigzag Motifs	1
Bowl with Large Diamond-Shaped Area	1
Bowl with Textured Surface Decoration	1
Bowl with Textured Surface Decoration in Basketry-Like Pattern	1
Boxed Beauty	1
Bracelet	1
Brandy Snifter	1
Bridge Vessel in the Form of a Pair of Interlocked Fish	1
Brownware Jar with Monkey in Relief on Flared Neck	1
Bust of a Man	1
Bust of Seleucus Nicator of Syria	1
Bust of Soldier	1
Bust Portrait of Carmelite Monk in Niche	1
Calyx Krater (Mixing Bowl)	1
Carp	2
Caudle Cup	1
Cello Player	1
Champs de Mars: The Red Tower	1
Charger	1
Charles Brandon	1
Cinq Personnages	1
Coach Watch	1
Coast of Maine	1
Coast Scene	1
Cockatoo and Pomegranate	1
Coffee Cup and Saucer	1
Coffee Pot	1
Coiled Trumpet in the Form of a Snarling Feline Face	1
Coin: 20 Marks	1
Combing Hair (Kamisuki)	1
Courtesan on White Elephant	1
Courtesan Parading Beneath Cherry Tree	1
Courtesan Reading a Letter	1
Courtesan Standing in Front of a Barred Window	1
Courtesan Washing her Hands	1
Courtesan Writing a Letter as Two Men Watch through a Window Lattice	1
Courtyard	1
Covered Bowl and Stand	1
Covered Bowl with Representations of French Rivers	1
Covered Cup	1
Covered Urn	1
Covered Vase	1
Crossing a River on a Moonlit Night	1
Crossing the River at Sano	1
Crowds on a Bridge	1
Crows in moonlight	1
Cruet Stand	1
Cup Depicting Rows of Lobsters or Crayfish	1
Cup with Cover and Saucer	1
Curving Vessel with Molded Head Spout	1
Cylindrical Seal with Flower-like Motif	1
Dance	1
Darmstadt Madonna	1
Departing Spring (Yûku haru)	1
Dessert Basket	1
Diana and Actaeon	1
Diana and Callisto	1
Dinner Plate	1
Dipper or Ladle with Interlocking Zigzag and Step-Fret Designs	1
Dish	2
Dish (Tabag) with Scale Pattern and Serrated Leaves	1
Don Quixote	1
Dora Maar au Chat	1
Double-Chambered Vessel with Serrated Stirrup Spout in Form of Human Head	1
Dr. Frank W. Gunzalus	1
Dr. Roggenbach of Bamberg	1
Eagle Standing on Pine Tree	1
Early Summer	1
Egg-Type Watch	1
Egret Standing in Rain	1
Egrets in Rain	1
Egrets in Snow	1
Eight Elvises	1
Elector Frederick III of Saxony, from Speculum intellectuale felicitatis humanae	1
Eric Leapt Out	1
Evening at the Tama River	1
Ewer	2
Eyebrow Pencil	1
Face Mask	1
Face Powder, from the series New Twelve Images of Modern Beauties	1
Fake Start	1
Feathered Ornament Depicting a Masked Figure Holding a Staff	1
Female Headdress (Nimba, D'mba, or Yamban)	1
Female Saint before a Ruler	1
Femme assise dans un jardin	1
Femme aux Bras Croisés	1
Fighting Knights Before Castle	1
Figure of a Woman Reading	1
Finely-Dressed Woman Crossing Nihonbashi Bridge	1
Finger Bowl	1
Fish Mask	1
Fishing Craft near the Cliffs at Collioure	1
Flag	1
Flagellation of Christ	1
Flight	1
Flower Girl in Holland	1
Flower Vase (one of a pair)	1
Footed Salver	1
Forest at Marignes	1
Fragment of a Blackware Vessel with a Relief Depicting a Warrior	1
France Lighting the World	1
Fresh Look	1
Full Length Standing Nude	1
Garçon à la pipe	1
Gathering Seaweed at Omori	1
Geese	1
Glass Cooler	1
Goblet	1
Goldfish	1
Goldweight Depicting a Chameleon	1
Goldweight Depicting a Standing Male Figure	1
Goldweight: Seated Figure	1

Green Car Crash (Green Burning Car I)	1
Green Mountains, Canada	1
Growing City	1
Hair Style of a Married Woman	1
Half Figure (Nio Byeri)	1
Handle Spout Vessel Depicting Seated Figure Drinking from Cup	1
Haunted House	1
Hawk on a Snow-covered branch	1
Head of a Girl	2
Head of Christ, in Three-Quarter Profile, to Right	1
Head of Executioner, from John Evelyn's Sculptura	1
Head of Perrin de Bassan	1
Heavy the Oar to Him Who is Tired, Heavy the Coat, Heavy the Sea	1
Helen Tracy Da Bous	1
Henry Branson	1
Hero Construction	1
Hilly Landscape with Cows and Shepherds in Foreground	1
Huax Relativity	1
Homage to the Square: Light Passage	1
Horse	1
Hotei and Two Children on a Boat	1
Hotoko Gionz Dancing before Taira no Kiyomori	1
House and Flowering Cherry Trees, Hamburg	1
Humming Birds, a Dandy Trio	1
Hydris (Water Jar)	1
Improvisation No. 30 (Cantos)	1
Inconvenient Partners in Wolfgang	1
Interior of St. Mark's, Venice	1
Iris	1
Isaku Yamamoto	1
James William Wallack	1
Jan de Wijs	1
Jar in the Form of a Figure Carrying a Drum and Carrying a Child	1
Jar in the Form of a Jaguar Head	1
Jar in the Form of an Abstract Human Head with Face Painting	1
Jar Shaped like an Insect with Single Spout in the Form of a Human Head	1
Jar with Repeating Depiction of Trophy Heads	1
Jeronimo de Brus	1
John Thomlinson and His Family	1
Joseph Gerrish	1
Joseph Sold by his Brothers	1
Jour de Fete	1
Julius Brutus Booth	1
Jurojin with cranes, a stag, and a tortoise	1
Karukaro (Drinking Cup)	1
Korinji Embroidery	1
Komurasaki of the Miurya and Shirai Gompachi (Miurya Komurasaki, Shirai Gompachi)	1
Kyrix (Drinking Cup)	2
L'Auberge du soleil levant	1
L'Estateque	1
La Poule	1
Lame Beggar Asking for Alms, from T's al verwart-gaen (It's already confusing)	1
Landscape	5
Landscape (The Lock)	1
Landscape in the Style of Ancient Masters: after Gao Kegong (1248-1310)	1
Landscape of the Four Seasons	1
Landscape with Figures	1
Landscape with Saint John on Patmos	1
Landscape with Two Poplars	1
Le Bassin aux Nympheas	1
Le Couple	1
Le Reve	1
Les Noces de Paquette	1
Life Cast of the Vacant Face of Abraham Lincoln	1
Lights of Other Days	1
Lion (One of a Pair, Stone Pedestal)	1
Lion Glass	1
Long Undergarment (Nagajuban)	1
Lovers Beneath an Umbrella in the Snow	1
Machine de Marly	1
Man Confronting Woman	1
Man in Thatched Hut Viewing the Moon	1
Man of Steel	1
Man with Lance Riding through the Snow	1
March at a Table	1
Mary (Poly) Lawson Bringhurst	1
Massacre of the Innocents	1
Mastoid (Drinking Cup)	2
Maternity	1
Matsue Bridge (Matsue Ohashi)	1
Matsu Izumo	1
Medal Depicting Divinities	1
Medal Depicting Prayer for Rain	1
Men Carrying Nets	1
Men in Peril	1
Men, Houses, Lanterns and Pushcart	1
Mercury	1
Mezzotinto	1
Mica, Rash, and Carrot	1
Mishish Lights	1
Milk Jug	1
Miracle of the Leaves and Fishes	1
Mona Curving Woman	1
Moonlight on Bay	1
Morning, Nude Sketch	1
Mount Equinox, Winter	1
Mower Hitting a Scythe	1
My Mother	1
Nihonbashi, from the series	1
No 1 Royal Red and Blue	1
No. 5, 1948	1
Noah Smith	1
Noh Actor	1
Nude Sitting on a Divan	1
Nude, Green Leaves and Bust	1
Nunier 19	1
Nydia, The Blind Water Girl of Pompeii	1
Octopus	1
Ojibwe (Fisher)	1
Old Oaks at Bras Beau	1
On Stage III	1
On the Road	1
On top and beneath Ryogoku Bridge (Ryogokubashi no ue, shita)	1
Ono no Tofu Watching a Leaping Frog	1
Orange, Red, Yellow	1
Owl and Cherry Blossoms	1
Painting with Green Center	1
Painting with Troika	1
Parody of a scene from The Pillow Book	1
Passing Rain	1
Pastoral Landscape with Ruins	1
Pasturage	1
Pasture in Normandy	1
Path by the Sea	1
Peasant Woman Against a Background of Wheat	1
Pendant in the Form of a Frog	1
Pendant in the Form of a Standing Male Playing a Musical Instrument	1
Pierre Dupuis, Painter to the King	1
Plate	1
Plate from the Duke of Clarence Service	1
Plate Nineteen, from The Bible	1
Plate with Still Life	1
Platter	1
Police Gazette	1
Pomegranate Castle	1
Porriinger	1
Portable Diptych with Compass, Sundial, and Perpetual Calendar	1
Portrait Bust of a Woman with a Large Collar	1
Portrait of a Farmer	1
Portrait of a Boy	1
Portrait of a Halberdier	1
Portrait of a Man	2
Portrait of a Man with a Pink	1
Portrait of a Sixty-year-old Woman	1
Portrait of Adele Bloch-Bauer I	1
Portrait of Alfonso d'Avila, Marquis of Vasto, in His Armor with a Page	1
Portrait of an Old Man	1
Portrait of Balza	1
Portrait of Don Emanuel Desvalls	1
Portrait of Dr. Gachet	1
Portrait of Edward Mol	1
Portrait of Frances Theresa, Duchess of Richmond (1648-1702)	1
Portrait of Jacques Nicolas Colbert, Archbishop of Rouen	1
Portrait of Jerome Napoleon, King of Westphalia, French Prince	1
Portrait of Joseph Roulin	1
Portrait of Maevana	1
Portrait of Mary Block	1
Portrait of Mary Butler-Christie of Ballinden	1
Portrait of Maudie Roulard	1
Portrait of Pablo Picasso	1
Portrait of Rembrandt	1
Popover Vase	1
Punch Bowl	1
Puppeteer	1
Pyxis (Container for Personal Objects)	1
Qur'an	1
Raku Ware Teabowl with Image of Mount Fuji	1
Raku-Ware Tea Bowl	1
Reach	1
Ready-to-Wear	1
Reclining Nude	1
Rememberance of Italy	1
Rescued Bird	1
Rideau, Crucifix and Comptoir	1
Rip Van Winkle	1
Rite	1
Roscoff	1
Rouge, from the series New Twelve Images of Modern Beauties	1
Sagey Hoshi	1
Saint George and the Dragon	1
Saint James the Greater	1
Saint John the Baptist in the Wilderness	1
Saint John the Evangelist	2
Salvator Mundi	1
Sauzeboat	2
Scene from Racine's Athalie	1
Scenic Wallpaper: The Battle of Helipolis	1
Seated Nude	1
Seated Old Man with Crutch	1
Secretary Cabinet	1
Self-Portrait	1
Senzoku Pond (Senzokuike), from the series Twenty Views of Tokyo (Tokyo nijukkei)	1
Serving Knife	1
Shepherd Boy	1
Shirayoshi Dancer Standing in Asazuma Boat	1
Shoki (Chinese: Zhong Kui)	1
Short-eared Demon Queller	1
Silver Cat Crab (Double Disaster)	1
Single Spoon Blackware Vessel with a Crayfish	1
Single-Spoon Bottle in the form of a Animal with Lined Skin	1
Single-Spoon Strap Vessel with Attached Molded Figures	1
Single-Spoon Vessel with a Crouched Legend Figure, Probably Decessus	1
Single-Handled Pedestal Jar with Geometric Motifs and Appliques on Shoulders	1
Sipped Away	1
Sir Joseph Banks	1
Sketch for the print Portrait of Yamada Kosaku	1
Sleeping Infant Faun Visited by an Inquisitive Rabbit	1
Sleeping Muse	1
Smurf Box	1
Solidus (Coin) of Emperor Theodosius I	1
Soup Plate from the Hope Service Made for the Duke of Clarence	1
Southeast-on-Sea	1
Souvenir of Tuscany	1
Spill	3
Springtime	1
St. Jerome Praying	1
Standing Figure, I	1
Stamp Depicting a Plant-like Motif	1
Standing Female Holding a Child in Her Arms	1
Standing Male Figure (Markish)	1
Still Life with Queen	1
Stirrup Spout Vessel in the Form of Two Drums	1
Stirrup Spout Vessel with Relief Depicting a Mythic Hunting Scene	1
Study of Pigs	1
Suhara Kiso	1
Suprematist Composition	1
Susanna Surprised by the Elders, from The Story of Susanna	1
Swooning Woman at the Door of a Nunnery, Supported by Nun and Young Man	1
Tall Case Clock	1
Tall Figure	1
Tea Bowl and Dish	1
Teacup and Saucer	1
Teapot with Cover	1
Tennō Temple	1
Teucer, Brother of Ajax	1
The Actor Bando Hikosaburo II	1
The Actor Ichikawa Ebizo IV as Sakuraku	1
The Actor Nakamura Kankuro I	1
The Actor Nakamura Gentaro as a woman playing battletole and shuttlecock	1
The Actor Onoe Kikugoro I holding a ruyap of the Actor Sanogawa Ichimatsu I	1
The Actor Onoe Hinpei I as Asahina Saburo	1
The Actor Sanogawa Ichimatsu I as Hisamatsu	1
The Actor Sanogawa Manjiku I	1
The Actor Segawa Kikunojo II	1
The Actor Yamanaka Heikuro I	1
The actor Yamanaka Heikuro I as a demon	1
The Actors Onoe Kikugoro I and Sanogawa Ichimatsu I dressed as mendicant monks (komissō)	1
The Actors Tamazawa Rinya, Uematsu Kubochi, and Ichikawa Monnosuke	1
The Annunciation	1
The Arch of Septimius Severus	1
The Banks of the Mare in Winter	1
The Bath	1
The Battle around the Shield and Lance	1
The Beggar Boy (The Young Pilgrim)	1
The Bewitched Mill	1
The Big Snowman	1
The Bride Traveling in the Rain, from the series The Foxes' Wedding	1
The Bull	1
The Card Players	1
The Cottage by the Roadside, Stormy Sky	1
The Courtesan Segawa of Matsubaya Watching Her Attendants Play Cat's Cradle	1
The Courtesan Yūgiri of Iburakijo, Ōsaka	1
The Courtesans Shizuka and Akashi of the Tamaya	1
The Double Bass Player	1
The Dreadful Feast of Flesh	1
The End of a Perfect Day	1
The Family Concert	1
The Gross Clinic	1
The Guardhouse	1
The Jewel River of Plovers	1
The Leap of the Rabbit	1
The Last Judgment	1
The Lost Pleiade	1
The Marriage of the Virgin	1
The Marsh	1
The Music Lesson	1
The Night	1
The Pimp's Death	1
The Print Collector	1
The Prophet Amos	1
The Road to Market	1
The Scream	1
The Shower	1
The Sumo Wrestler Kurogumo Otoz	1
The Treasure Ship	1
The Unlucky Attempt	1
The Visitation	1
The Waitress Oshia of the Takashimaya	1
The Watermill with the Great Red Roof	1
The Wedding at Cana	1
Thirst	1
Three Bears, plate ten from Four-Legged Animals	1
Three Little Girls	1
Three Oriental Figures (Jacob and Laban?)	1
Three Studies for a Portrait of John Edwards	1
Three Studies of Lucas Freud	1
Tiger Resting	1
Tobias and the Angel	1
Toilette (Before the Mirror)	1
Tortilla Maker	1
Tray	1
Tripod Bowl Depicting Head of Bird on its Interior Surface	1
Triptych, 1976	1
Turon and Stand	2
Turquoise Marilyn	1
Two Boys as the Eccentric Monks Kanzan (Chinese: Hanshan) and Jitoku (Chinese: Shide)	1
Two Girls	1
Two warriors	1
Unfinished Study of Sheep	1
Untitled	1
Vase	2
Vase (part of a Collection of 5 Vases)	1
Vase with a Relief Depicting Birds and Fish	1
Vessel in the Form of a Gourd	1
Vessel in the Form of a Human Head, Probably a Trophy Head	1
Vessel in the Form of a Severed Trophy Head	1
Vessel of a Harvester	1
Wall Pocket	1
Watch	1
Water Pitcher and Basin	1
Wherefore	1
White Center (Yellow, Pink and Lavender on Rose)	1
Widely-Mouthed Cup Depicting a Costumed Performer and Mice, with Modeled Heads	1
Wild Boars	1
William Brown	1
Window Grille	1
Windy Morning	1
Within the Lines	1
Wolf	1
Woman III	1
Woman Weaving	1
Woman with a Fan	1
Woman's Bath	1
Women Harvesting	1
Wounded Eurydice	1
Wounded Lionsess	1
Yamabusa Breast Feeding Kintaro	1
Yangi Bridge in Snow	1
Yo, Peacock	1
Yokihi (Chinese: Yang Guifei) with attendant	1
Young Man Dressed as Mendicant Monk	1
Young Man Riding a Giant Tortoise (parody of Utsukushia Taro)	1
Young Man with Symbols of the First Dream of the New Year	1
Young Woman Applying Rouge (Portrait of Chiyotaka, a Maiko of Gion, Kyoto)	1
Young Woman Bearing Flowers	1
Young Woman Holding a Kerria Branch (parody of Oda Dokan)	1
Young Woman Walking Near a Stream	1
Yufuku Hot Spring in Iwami (Iwami Yufuku onsen)	1
Yushima from the series Scenes of Ten Tabouses (Chamise jikkai)	1
Zhichuan Revettemen	1

Query#6:

```
elif query_data['onechoice'] == 'queery_6':  
    return display_function(f"""SELECT      E.exhibitID, sum(S.transactionPrice)AS TotalRev  
    FROM Exhibit AS E, SellTo AS S, Customer AS C  
    WHERE      E.exhibitID = S.exhibitID AND S.customerID = C.CustomerID  
    GROUP BY      E.exhibitID""")
```

Query#6 Output:

exhibitID TotalRev	
3000017	1313421100
3000023	556594600
3000011	505246200
3000014	670359600
3000009	1155526000
3000013	1239309200
3000007	669173100
3000005	875968700
3000021	923641200
3000025	697567100
3000022	1131071700
3000015	446199800
3000001	804804600
3000024	1011145000
3000019	582710400
3000008	772012800
3000018	829924100
3000002	509909400
3000003	517048200
3000020	828155600
3000012	873357500
3000004	497838300
3000016	204793700
3000006	719124300
3000010	704539200

Query#7:

```
elif query_data['onechoice'] == 'queery 7':  
    return display_function(f"""SELECT E.address, R.artTitle  
        FROM Exhibit AS E, Artwork as R  
        WHERE E.exhibitID = R.exhibitID  
        ORDER BY E.address""")
```

Query#7 Output:

address	artTitle	Art Gallery of Ontario, Toronto, Canada	Saint Jerome
Albermarle Gallery, London, UK	Saint John the Evangelist	Joseph Sold by his Brothers	
Albermarle Gallery, London, UK	Portrait of a Man	Don Quixote	
Albermarle Gallery, London, UK	Bust Portrait of Camille Monk in Niche	Flight	
Albermarle Gallery, London, UK	Landscape (The Lock)	A Wheatsheaf with Cypresses	
Albermarle Gallery, London, UK	A Young Woman in a Summer Shower	Sir Joseph Banks	
Albermarle Gallery, London, UK	Mariette de Marly	La Couplet	
Albermarle Gallery, London, UK	Courtesan Sealing a Letter	An Italian Comedy in Verona	
Albermarle Gallery, London, UK	Landscape	Goldweight; Seated Figure	
Albermarle Gallery, London, UK	Miracle of the Loaves and Fishes	Omochoe (Pitcher)	
Albermarle Gallery, London, UK	Courtesan Standing in Front of a Barred Window	Shirahiyoshi Dancer Standing in Asszuma Boat	
Albermarle Gallery, London, UK	Woman's Bath	The Actor Onoe Kikugoro I holding a puppet of the Actor Sanogawa Ichimatsu I	
Albermarle Gallery, London, UK	Eagle Standing on Pine Tree	Head of Pierrot le Wissous	
Albermarle Gallery, London, UK	Swooning Woman at the Door of a Nunery, Supported by Nun and Young Man	Young Woman Playing with a Stream	
Albermarle Gallery, London, UK	Tiny	Cylindrical Seal with Flower-like Motif	
Albermarle Gallery, London, UK	Mount Etna, Winter	Young Woman Bearing Flowers	
Albermarle Gallery, London, UK	The Actor Nakamatsu Denchiro I	Two Warriors	
Albermarle Gallery, London, UK	Coin, 20 Marks	Plate	
Albermarle Gallery, London, UK	Champs de Mars: The Red Tower	Qu'fin	
Albermarle Gallery, London, UK	Nydia, The Blind Flower Girl of Pompeii	Statue of Claude	
Albermarle Gallery, London, UK	Owl and Cherry Blossoms	Beauty Beneath a Willow Tree	
Albermarle Gallery, London, UK	Lame Beggar Asking for Alms, from 'Ait al verayd gaucet (It's already confusing)	Fish Mask	
Albermarle Gallery, London, UK	Allegory of Agriculture	Hair Style of a Married Woman	
Albermarle Gallery, London, UK	Portrait of Aude Bloch-Bauer I	The Long Undergarment	
Albermarle Gallery, London, UK	Portrait of a Man	Fishing Craft near the Cliffs at Collioure	
Albermarle Gallery, London, UK	Portrait of a Man with a Pink	Evening at the Tama River	
Albermarle Gallery, London, UK	Acrobate ac stane arlequin	Portrait of Mary Black	
Albermarle Gallery, London, UK	Orange, Red, Yellow	On top and beneath Ryogokubashi Bridge (Ryogokubashi no ue, shita)	
Albermarle Gallery, London, UK	Rajput Vase	Alphonsine Storage Jar	
Albermarle Gallery, London, UK	Landscape	The Shower	
Albermarle Gallery, London, UK	Stirrup Spout Vessel with Relief Depicting a Mythic Hunting Scene	The March	
Albermarle Gallery, London, UK	Women Harvesting	Two Girls	
Albermarle Gallery, London, UK	Plate Ninedash, from The Bible	Approaching Dusk on Furukawa Embankment (Kure iki Furukawazutsumi)	
Albermarle Gallery, London, UK	Bowl with Bold Black-and-White Diamond and Zigzag Motif	Head of Executioner, from John Evelyn's Sculptura	
Albermarle Gallery, London, UK	Articulated Dragon	March a la Table	
Albermarle Gallery, London, UK	Blackware Art in the Form of an Animal, Possibly a Llama	Gathering Seaweed at Omon	
Albermarle Gallery, London, UK		The Lost Pleade	
Alleppey, India	Charger	Reclining Nude	
Alleppey, India	Watch	Landscape with Figures	
Alleppey, India	The Cottage by the Roadsides, Stormy Sky	Wounded Burlydoe	
Alleppey, India	Stamp Depicting a Plant-like Motif	On the Road	
Alleppey, India	Plate	Portrait of Dr. Gachet	
Alleppey, India	Teapot with Cover	Portrait of Pablo Picasso	
Alleppey, India	Covered Bowl with Representations of French Rivers		
Alleppey, India	False Start	Coast of Maine	
Alleppey, India	Watch	Vessel in the Form of a Severed Trophy Head	
Alleppey, India	The Road to Market	Elector Frederick III of Saxony, the Speculum intellectuale felicitatis humanae	
Alleppey, India	White Center (Yellow, Pink and Lavender on Rose)	Landscape	
Alleppey, India	Reich	Bronxmeire	
Alleppey, India	Dr. Rögenbüchel of Bamberg	Blackware Stirrup Spout Vessel with Relief Depicting Warriors with Raised Arms	
Alleppey, India	Flag	The End of a Perfect Day	
Alleppey, India	Rite	Blackware Plate	
Alleppey, India	Anne of Austria, Queen of France	No. 5, 1948	
Art Gallery of Ontario, Toronto, Canada	Covered Bowl and Stand	October Day	
Art Gallery of Ontario, Toronto, Canada	Along the Beach, England	Soup Plate from the Hope Service Made for the Duke of Clarence	
Art Gallery of Ontario, Toronto, Canada	Cruet Stand	Portrait of Rembrandt	
Art Gallery of Ontario, Toronto, Canada	Pendant in the Form of a Standing Male Playing a Musical Instrument	Tortilla Maker	
Art Gallery of Ontario, Toronto, Canada	The Actor Segawa Kikunoo II	Coiled Trumpet in the Form of a Snarling Feline Face	
Art Gallery of Ontario, Toronto, Canada	Plate	Tea Bowl and Dish	
Art Gallery of Ontario, Toronto, Canada	Covered Urn	Joseph Gerrish	
Art Gallery of Ontario, Toronto, Canada	Footed Salver	Egret Standing in Rain	
Art Gallery of Ontario, Toronto, Canada	Cello Player	Figure of a Woman Reading	
Art Gallery of Ontario, Toronto, Canada	Pyxis (Container for Personal Objects)	Portrait of Jacques Nicolas Colbert, Archbishop of Rouen	
Art Gallery of Ontario, Toronto, Canada	Monks Carrying Woman	Two Boys as the Eccentric Monks Kanzan (Chinese: Hanshan) and Jittoku (Chinese: Shide)	
Art Gallery of Ontario, Toronto, Canada	Dish	Tiger Resting	
Art Gallery of Ontario, Toronto, Canada	The Unlucky Attempt	St. Jerome Praying	
Art Gallery of Ontario, Toronto, Canada	The Leap of the Rabbit	Sipped Away	
Art Gallery of Ontario, Toronto, Canada	Darmstadt Madonna	Green Car Crash (Green Burning Carr.)	
Art Gallery of Ontario, Toronto, Canada	Suprematist Composition	Henry Brandon	
Art Gallery of Ontario, Toronto, Canada	Yufuku Hot Spring in Iwami (Iwami Yufuku onsen)	Unfinished Study of Sheep	
Art Gallery of Ontario, Toronto, Canada	Black Fire I	Fresh Look	
Art Gallery of Ontario, Toronto, Canada	Jar in the Form of an Abstract Human Head with Face Painting	Calyx Krater Mixing Bowl	
Art Gallery of Ontario, Toronto, Canada	A Burgher of Calais (Jean d'Aire)	Within the Lines	
Art Gallery of Ontario, Toronto, Canada	Mower Howing a Scythe	Hoax Relativity	
Art Gallery of Ontario, Toronto, Canada	Single Spout Blackware Vessel in the Form of a Crayfish	The Actor Ichikawa Ebizo II as Sukeroku	
Art Gallery of Ontario, Toronto, Canada	Goldweight Depicting a Standing Male Figure	Young Man Dressed as Mendicant Monk	
Art Gallery of Ontario, Toronto, Canada	The Beggar Boy (The Young Pilgrim)	Alleyway Lights	
Art Gallery of Ontario, Toronto, Canada	Helena Tromper Du Bois	Saucepot	
Art Gallery of Ontario, Toronto, Canada	Police Gazette	Diana and Actaeon	
Art Gallery of Ontario, Toronto, Canada	Saint Jerome	Portrait of Marevna	
Art Gallery of Ontario, Toronto, Canada		Kylix (Drinking Cup)	
Art Gallery of Ontario, Toronto, Canada		Windy Morning	
Art Gallery of Ontario, Toronto, Canada		Bal du moulin de la Galette	
Art Gallery of Ontario, Toronto, Canada		Finger Bowl	
Art Gallery of Ontario, Toronto, Canada		Secretary Cabinet	
Art Gallery of Ontario, Toronto, Canada		Liqueur Glass	
Art Gallery of Ontario, Toronto, Canada		Abiel	

Beacon, New York	Blackware Jar in the Form of a Figure with Bound Arms and Legs	Gamde, São Paulo, Brazil	A Mother Feeding her Child (The Happy Mother)	Philadelphia Museum of Art	Men in for Life
Beacon, New York	Hunted House	Gamde & Co., São Paulo, Brazil	Antennae	Philadelphia Museum of Art	Fairy-Dessert Ware, Crinian, Nihonsho Bridge
Beacon, New York	Blinded by the Rays	Gamde & Co., São Paulo, Brazil	Mercury	Philadelphia Museum of Art	Portable Dishes with Compan, Sandal, and Perpetual Calendar
Beacon, New York	Patron of the Arts Ruins	Guggenheim Museum, New York City	The Bewitched Mill	Philadelphia Museum of Art	Portrait of Monsieur Rouland
Beacon, New York	The Courtesan Segawa of Matsueya Watching Her Attendants Play Cat's Cradle	Guggenheim Museum, New York City	Desert Barker	Philadelphia Museum of Art	Men, Houses, Lantern and Proscurt
Beacon, New York	The Actor Sanogawa Mangaki I	Guggenheim Museum, New York City	Departing (Kakemono horo)	Philadelphia Museum of Art	Hilly Landscape with Figures and Sheep in Foreground
Beacon, New York	End of War	Guggenheim Museum, New York City	The Sumo Wrestler Karugamo Otoz	Philadelphia Museum of Art	The Bell
Beacon, New York	Pierre Dupont's Return to the King	Guggenheim Museum, New York City	Covered Vase	Yushima from the series Scenes of Ten Tahouses (Chamie jikkō)	Yushima from the series Scenes of Ten Tahouses (Chamie jikkō)
Beacon, New York	Le Bassin aux Nympheas	Guggenheim Museum, New York City	The Actors Once Kikugoro I and Sanogawa Ichimatsu I dressed as mendicant monks (komuso)	Philadelphia Museum of Art	Courtesy of the White Elephant
Beacon, New York	Crowds on a Bridge	Guggenheim Museum, New York City	Angels of the World	Philadelphia Museum of Art	Lovers
Beacon, New York	Plate with Still Life	Guggenheim Museum, New York City	Brave Light of the World	Philadelphia Museum of Art	The Wedding at Cana
Beacon, New York	Eyebrow and Lip Powder	Guggenheim Museum, New York City	Bust of Soldier	Philadelphia Museum of Art	Untitled
Beacon, New York	Ukemi Plant	Guggenheim Museum, New York City	The Annunciation	Philadelphia Museum of Art	William Brown
Beacon, New York	Punch Bowl	Guggenheim Museum, New York City	Egrets in Rain	Philadelphia Museum of Art	Boat
Beacon, New York	Egrets in Snow	Guggenheim Museum, New York City	Grosvenor City	Philadelphia Museum of Art	City
Beacon, New York	Le Loup	Guggenheim Museum, New York City	Leob	Philadelphia Museum of Art	Tester, Brother of Ajax
Beacon, New York	Portrait of Alfonso d'Avila, Marquif of Vasto, in Armor with a Page	Guggenheim Museum, New York City	Rideau, Crucifix and Compotier	Philadelphia Museum of Art	On Stage III
Beacon, New York	Coffee Pot	Guggenheim Museum, New York City	Coast Scene	Queen's Gallery, Buckingham Palace, London, UK	Anacreon with the Infants Bacchus and Cupid
Beacon, New York	Blackware Jug with Single Spout	Guggenheim Museum, New York City	Porter	Queen's Gallery, Buckingham Palace, London, UK	A Man in a Coat with a Horn
Beacon, New York	Matushina Ryōjin Chōshū	Guggenheim Museum, New York City	Poising with a Cuckoo	Queen's Gallery, Buckingham Palace, London, UK	Man in Thatched Hat Playing the Moon
Beacon, New York	Boat Depicting a Royal Barge in Horizontal Row	Guggenheim Museum, New York City	The Dreadful Feast of Flesh	Queen's Gallery, Buckingham Palace, London, UK	Female Headress (Nimbi, Drimbi, or Yamani)
Capitoline Museum, Rome, Italy	Standing Female Figure Holding a Child in Her Arms	Institute of Contemporary Arts, London, UK	Mice, Radish, and Carrot	Queen's Gallery, Buckingham Palace, London, UK	Long Undergarment (Nagajuban)
Capitoline Museum, Rome, Italy	Massacre of the Innocents	Institute of Contemporary Arts, London, UK	Lovers Beneath an Umbrella in the Snow	Queen's Gallery, Buckingham Palace, London, UK	Zhichuan Resteslemen
Capitoline Museum, Rome, Italy	Single Spout Vessel in the Form of a Crossed-Legged Figure, Probably Deceased	Institute of Contemporary Arts, London, UK	Wardrobe	Queen's Gallery, Buckingham Palace, London, UK	Southern-on-Sea
Capitoline Museum, Rome, Italy	Double-Chambered Vessel with Separate Spout in Form of Human Head	Institute of Contemporary Arts, London, UK	Blackware Cup with Abstact Faces Carved in Panels	Queen's Gallery, Buckingham Palace, London, UK	Alone
Capitoline Museum, Rome, Italy	Winehorn and Stand	Institute of Contemporary Arts, London, UK	On no Tofu Watching a Leaping Frog	Queen's Gallery, Buckingham Palace, London, UK	Soldiers (Cost of Empire Theodore I)
Capitoline Museum, Rome, Italy	Winehorn	Institute of Contemporary Arts, London, UK	Bowl with Large Diamond-Shaped Area	Queen's Gallery, Buckingham Palace, London, UK	Tall Case Clock
Capitoline Museum, Rome, Italy	Crow in moonlight	Institute of Contemporary Arts, London, UK	Landscape with Saint on Patons	Queen's Gallery, Buckingham Palace, London, UK	The Courtesy Yugi of Burkelya, Okusa
Capitoline Museum, Rome, Italy	Amber Light	Institute of Contemporary Arts, London, UK	Komagata Embassament	Queen's Gallery, Buckingham Palace, London, UK	Portrait of Edouard Mol
Capitoline Museum, Rome, Italy	The Geisha	Institute of Contemporary Arts, London, UK	Suhara Kiso	Queen's Gallery, Buckingham Palace, London, UK	Flower Vase (one of a pair)
Capitoline Museum, Rome, Italy	Window Grille	Institute of Contemporary Arts, London, UK	Nude Sitting on a Divan	Queen's Gallery, Buckingham Palace, London, UK	Single-Handled Pedestal Vase with Lid and Appliance on Shoulders
Capitoline Museum, Rome, Italy	The Gross Clinic	Institute of Contemporary Arts, London, UK	No I (Royal Blue and Rose)	Queen's Gallery, Buckingham Palace, London, UK	Dish (Taha) with Scale Pattern and Serrated Leaves
Capitoline Museum, Rome, Italy	Crossing the River at Sano	Institute of Contemporary Arts, London, UK	Goldweight	Queen's Gallery, Buckingham Palace, London, UK	Sketch for the print Portrait of Yamada Kouki
Capitoline Museum, Rome, Italy	The Actor Nakamura Kōjirō as a Demon	Institute of Contemporary Arts, London, UK	Medal Depicting Diogenes	Queen's Gallery, Buckingham Palace, London, UK	
Capitoline Museum, Rome, Italy	Remembrance of Italy	Institute of Contemporary Arts, London, UK	Saint James the Greater	Queen's Gallery, Buckingham Palace, London, UK	
Capitoline Museum, Rome, Italy	The Actor Nakamura Gentaro as a woman playing shuttlecock and shuttlecock	Institute of Contemporary Arts, London, UK	Woman with a Fan	Queen's Gallery, Buckingham Palace, London, UK	
Capitoline Museum, Rome, Italy	Horse	Institute of Contemporary Arts, London, UK	Goldweight Depicting a Chameleon	Queen's Gallery, Buckingham Palace, London, UK	
Capitoline Museum, Rome, Italy	Jet in the Shape of a Dragon Head	Institute of Contemporary Arts, London, UK	Lisson Gallery, London, UK	Portrait of a Seated Severus	
Capitoline Museum, Rome, Italy	Row with Tumulus Surface Decoration	Institute of Contemporary Arts, London, UK	Lion (One of a Pair, Southeast)	Lisson Gallery, London, UK	
Capitoline Museum, Rome, Italy	The Jewel River of Plover	Institute of Contemporary Arts, London, UK	Rouge, from the series New Twelve Images of Modern Beauties	Lisson Gallery, London, UK	
Capitoline Museum, Rome, Italy	The Courtesans Shirana and Akashi of the Tamaya	Institute of Contemporary Arts, London, UK	Improvisation No. 30 (Canons)	Lisson Gallery, London, UK	
Capitoline Museum, Rome, Italy	Matsu Izumo	Institute of Contemporary Arts, London, UK	Female Saint before a Ruler	Lisson Gallery, London, UK	
Capodimonte, Italy	Half-Signed (No Byeri)	Lisson Gallery, London, UK	Covered Cup	Lisson Gallery, London, UK	
Capodimonte, Italy	Couch Watch	Lisson Gallery, London, UK	Charles VI	Lisson Gallery, London, UK	
Capodimonte, Italy	Mysteria	Lisson Gallery, London, UK	The Actor Ono Heihachi I	Lisson Gallery, London, UK	
Capodimonte, Italy	Hotel and Two Children on a Boat	Lisson Gallery, London, UK	Irises	Lisson Gallery, London, UK	
Capodimonte, Italy	Woman in a Circle	Lisson Gallery, London, UK	Female and Boys Crocuses	Lisson Gallery, London, UK	
Capodimonte, Italy	Portrait of a Castle	Lisson Gallery, London, UK	Rouge, from the series New Twelve Images of Modern Beauties	Lisson Gallery, London, UK	
Coddi Gallery, Russia	The Marriage of the Virgin	Lisson Gallery, London, UK	The Arch of Septimius Severus	Lisson Gallery, London, UK	
Coddi Gallery, Russia	Aspin Aplike	Lisson Gallery, London, UK	Lion (One of a Pair, Southeast)	Lisson Gallery, London, UK	
Coddi Gallery, Russia	Pendant in the Form of a Frog	Lisson Gallery, London, UK	Rouge, from the series New Twelve Images of Modern Beauties	Lisson Gallery, London, UK	
Coddi Gallery, Russia	Man in a Cap	Lisson Gallery, London, UK	Wide-Mouth Cup Depicting a Costumed Performer and Music with Molded Heads	Lisson Gallery, London, UK	
Coddi Gallery, Russia	Interior of St. Mark's, Venice	Lisson Gallery, London, UK	Crossing a River on a Moonlit Night	Lisson Gallery, London, UK	
Coddi Gallery, Russia	L'Intaglio	Lisson Gallery, London, UK	Scenes with Figures in Relief on Hippotilos	Lisson Gallery, London, UK	
Coddi Gallery, Russia	Head of a Girl	Lisson Gallery, London, UK	Nihonsho	Lisson Gallery, London, UK	
Coddi Gallery, Russia	Betrothed Couple	Lisson Gallery, London, UK	Hydra (Water Jar)	Lisson Gallery, London, UK	
Coddi Gallery, Russia	Portrait of a Girl	Lisson Gallery, London, UK	Portrait of a Haberdasher	Lisson Gallery, London, UK	
Coddi Gallery, Russia	Two Figures in a Garden	Lisson Gallery, London, UK	Single Spout Bottle in the Form of an Animal with Lined Skin	Lisson Gallery, London, UK	
Coddi Gallery, Russia	Pair of Birds	Lisson Gallery, London, UK	Masked (Dancer) Cup	Lisson Gallery, London, UK	
Coddi Gallery, Russia	Between the Arts	Lisson Gallery, London, UK	Rescued Bird	Lisson Gallery, London, UK	
Coddi Gallery, Russia	Landscape	Lisson Gallery, London, UK	Rip van Winkle	Lisson Gallery, London, UK	
Coddi Gallery, Russia	Candle Cup	Lisson Gallery, London, UK	The Big Snowman	Lisson Gallery, London, UK	
Coddi Gallery, Russia	Three Studies for a Portrait of John Edwards	Lisson Gallery, London, UK	Heavy the Oar in His Hand, Heavy the Heart, Heavy the Sea	Lisson Gallery, London, UK	
Coddi Gallery, Russia	Throne	Lisson Gallery, London, UK	Young Man Boiling a Giant Tortoise (Portrait of Uyushio Taro)	Lisson Gallery, London, UK	
Coddi Gallery, Russia	Two Women with Queen	Lisson Gallery, London, UK	Forest at Marquette	Lisson Gallery, London, UK	
Coddi Gallery, Russia	Jar Shaped like a Curling Insect with Single Spout in the Form of a Human Head	Lisson Gallery, London, UK	Inconvenient Partners in Waltzing	Lisson Gallery, London, UK	
Phi Galley, Russia	Path by the Sea	Lisson Gallery, London, UK	Standing Male Figure (Makishi)	Lisson Gallery, London, UK	
Phi Galley, Russia	Portrait of a Sixty-year-old Woman	Lisson Gallery, London, UK	A Young Woman Watching Fingis	Lisson Gallery, London, UK	
Phi Galley, Russia	Abraham and Isaac	Lisson Gallery, London, UK	Head of Christ in Three Quarter Profile, to Right	Lisson Gallery, London, UK	
Phi Galley, Russia	The Actor Bandō Hikosaburō II	Lisson Gallery, London, UK	Arrangement in Hish Color and Bone: Portrait of Author Jerome Eddy	Lisson Gallery, London, UK	
Phi Galley, Russia	Saint John the Baptist in the Wilderness	Lisson Gallery, London, UK	Egg-Type Watch	Lisson Gallery, London, UK	
Phi Galley, Russia	Two Figures in a Garden	Lisson Gallery, London, UK	La Poule	Lisson Gallery, London, UK	
Phi Galley, Russia	Wolf	Lisson Gallery, London, UK	Midnight Lights	Lisson Gallery, London, UK	
Phi Galley, Russia	Toilette (Before the Mirror)	Lisson Gallery, London, UK	Morning Sketch	Lisson Gallery, London, UK	
Phi Galley, Russia	Seated Old Man with Crotch	Lisson Gallery, London, UK	Lights of Our Days	Lisson Gallery, London, UK	
Phi Galley, Russia	Young Man Boiling a Giant Tortoise (Portrait of Uyushio Taro)	Lisson Gallery, London, UK	Silver Cup Crash Double Disaster	Lisson Gallery, London, UK	
Forlì Art Gallery, Florence, Italy	Fragment of a Blackware Vessel with Small Relief Depicting a Warrior	National Gallery of Art, Washington DC	Early Summer	Philadelphia Museum of Art	Mad Girl
Forlì Art Gallery, Florence, Italy	Feast of a Masked Figure Holding a Staff	National Gallery of Art, Washington DC	Adèle (Madame II)	Philadelphia Museum of Art	Hawk on Snow-covered branch
Forlì Art Gallery, Florence, Italy	Man Confronting a Woman	National Gallery of Art, Washington DC	Snowball	Philadelphia Museum of Art	Yamaba Breeding Kitaro
Forlì Art Gallery, Florence, Italy	A Masked Figure	National Gallery of Art, Washington DC	Painting with Troika	Philadelphia Museum of Art	Parade in Normandy
Forlì Art Gallery, Florence, Italy	Number 19	National Gallery of Art, Washington DC	Plate from the Duke of Clarence Service	Philadelphia Museum of Art	Blackware Narrow Neck Vessel with a Broad Shoulder Impressed with Birds
Forlì Art Gallery, Florence, Italy	John Thominson and His Family	National Gallery of Art, Washington DC	Stepford Boy	Philadelphia Museum of Art	Le Noe's Ark
Forlì Art Gallery, Florence, Italy	Carving Vessel with Molded Head	National Gallery of Art, Washington DC	Tea Caddy	Philadelphia Museum of Art	Takao Yasuhisa
Forlì Art Gallery, Florence, Italy	Flagellation of Christ	National Gallery of Art, Washington DC	Rescue Bird	Philadelphia Museum of Art	Tea Cup and Saucer
Forlì Art Gallery, Florence, Italy	Saint John the Baptist in the Wilderness	National Gallery of Art, Washington DC	Rip van Winkle	Philadelphia Museum of Art	Landscape of the Four Seasons
Forlì Art Gallery, Florence, Italy	Two Figures in a Garden	National Gallery of Art, Washington DC	The Big Snowman	Philadelphia Museum of Art	Man with a Long Nose Playing in the Snow
Forlì Art Gallery, Florence, Italy	Wolf	National Gallery of Art, Washington DC	Heavy the Oar in His Hand, Heavy the Heart, Heavy the Sea	Philadelphia Museum of Art	Kyūki (Drinking Cup)
Forlì Art Gallery, Florence, Italy	Toilette (Before the Mirror)	National Gallery of Art, Washington DC	Young Man Boiling a Giant Tortoise (Portrait of Uyushio Taro)	Philadelphia Museum of Art	The Double Bass Player
Forlì Art Gallery, Florence, Italy	Seated Old Man	National Gallery of Art, Washington DC	Forest at Marquette	Philadelphia Museum of Art	Courtesy Washing her Hands
Forlì Art Gallery, Florence, Italy	Young Man Boiling a Giant Tortoise (Portrait of Uyushio Taro)	National Gallery of Art, Washington DC	Inconvenient Partners in Waltzing	Philadelphia Museum of Art	Face Powder, from the series New Twelve Images of Modern Beauties
Forlì Art Gallery, Florence, Italy	James the Great	National Gallery of Art, Washington DC	Standing Male Figure (Makishi)	Philadelphia Museum of Art	Bridge Vessel in the Form of a Pair of Interlocked Fish
Forlì Art Gallery, Florence, Italy	Face Mask	National Gallery of Art, Washington DC	A Young Woman Watching Fingis	Philadelphia Museum of Art	Bottle
Galleria di Mapunendo, Milan, Italy	Figure	National Gallery of Art, Washington DC	Head of Christ in Three Quarter Profile, to Right	Philadelphia Museum of Art	Life Cast of the Hands and Face of Abraham Lincoln
Galleria di Mapunendo, Milan, Italy	Two Figures	National Gallery of Art, Washington DC	Arrangement in Hish Color and Bone: Portrait of Author Jerome Eddy	Philadelphia Museum of Art	L'Aigle du soleil levant
Galleria di Mapunendo, Milan, Italy	The Bath	National Gallery of Art, Washington DC	Egg-Type Watch	Philadelphia Museum of Art	Full Length Standing Nude
Galleria di Mapunendo, Milan, Italy	Fighting Knights Before Castle	National Gallery of Art, Washington DC	La Poule	Philadelphia Museum of Art	Combining Hair (Kamusiki)
Galleria di Mapunendo, Milan, Italy	Smart Gothic	National Gallery of Art, Washington DC	Midnight Lights	Philadelphia Museum of Art	The Banker in Winter
Galleria di Mapunendo, Milan, Italy	Small Box	National Gallery of Art, Washington DC	Morning Sketch	Philadelphia Museum of Art	Seizing Knives
Galleria di Mapunendo, Milan, Italy	Army Storage Jar	National Gallery of Art, Washington DC	Portrait of an Old Man	Philadelphia Museum of Art	Roscoff
Galleria di Mapunendo, Milan, Italy	Naomi Beads	National Gallery of Art, Washington DC	Female assist dans un jardin	Philadelphia Museum of Art	Mezzane
Galleria di Mapunendo, Milan, Italy	Hoekka Gōzoku Dancing before Taira no Kiyomori	National Gallery of Art, Washington DC	Jar with Repeating Decoupage of Trophy Heads	Philadelphia Museum of Art	Triplet (1976)
Galleria di Mapunendo, Milan, Italy	Gōsō	National Gallery of Art, Washington DC	Young Woman Applying Rouge (Portrait of Chiyofa, a Maiko of Gion, Kyoto)	Philadelphia Museum of Art	Coffee Caged Saucer
Galleria di Mapunendo, Milan, Italy	Handle Spout Vessel Depicting Small Figures Drinking from a Cup	National Gallery of Art, Washington DC	The Print	Philadelphia Museum of Art	Turquoise/Marlin
Galleria di Mapunendo, Milan, Italy	Monks	National Gallery of Art, Washington DC	Blackware Incense Burner with Relief Depicting Felines	Philadelphia Museum of Art	Moonlight on Bay
Galleria di Mapunendo, Milan, Italy	Single Spout Vessel with Attached Molded Figure	National Gallery of Art, Washington DC	Susanna Surprised by the Elders, from the Story of Susanna	Philadelphia Museum of Art	Hunting the Partridge Trio
Galleria di Mapunendo, Milan, Italy	Portrait of a Woman with a Large Collar	National Gallery of Art, Washington DC	Stirrup Spout Vessel in the Form of Two Drums	Philadelphia Museum of Art	The Night
Galleria di Mapunendo, Milan, Italy	Glass Colder	National Gallery of Art, Washington DC	Dr. Frank W. Gossals	Philadelphia Museum of Art	Portrait of Don Emmanuel Desvaux
Galleria di Mapunendo, Milan, Italy	Wine Glass	National Gallery of Art, Washington DC	Homage to the Moon Passage	Philadelphia Museum of Art	Yokoh (Chinese Yang Guifei) with attendants
Galleria di Mapunendo, Milan, Italy	Wine	National Gallery of Art, Washington DC	Eaten Tea Bowl	Philadelphia Museum of Art	Yo, Picasso
Galleria di Mapunendo, Milan, Italy	Young Woman Holding a Kombu Branch (pseud. of Ota Dokan)	National Gallery of Art, Washington DC	Vessel (Ayabukuro) with Relief Depicting Birds and Fish	Philadelphia Museum of Art	Sheki (Chang'an Chang'an Kai)
Galleria di Mapunendo, Milan, Italy	A Man in a Cap	National Gallery of Art, Washington DC	A Young Man Careless the Young Hostess	Philadelphia Museum of Art	Third
Galleria di Mapunendo, Milan, Italy	Ancient Vessel	National Gallery of Art, Washington DC	Landscape in the Style of Ancient Masters: after Gōkyōrei (1248-1310)	Philadelphia Museum of Art	Jeonjoo de Bran
Galleria di Mapunendo, Milan, Italy	Gōsō	National Gallery of Art, Washington DC	Cup with Cover and Saucer	Philadelphia Museum of Art	Courtesans Pardoning Cherry Tree
Galleria di Mapunendo, Milan, Italy	Scene from Racine's Athalie	National Gallery of Art, Washington DC	Flower Girl in Holland	Philadelphia Museum of Art	Wild Boar
Galleria di Mapunendo, Milan, Italy	Portrait of Mary Butler Stark's Ballades	National Gallery of Art, Washington DC	Barks Flying in the Storm	Philadelphia Museum of Art	Vase (part of a Garniture of 5 Vases)
Galleria di Mapunendo, Milan, Italy	Self-Portrait	National Gallery of Art, Washington DC	Big Action	Philadelphia Museum of Art	The Bride Traveling in the Night, from the Foxes Wedding
Galleria di Mapunendo, Milan, Italy	Study of Peas	Puris Site, Hong Kong	Saint John the Evangelist	Philadelphia Museum of Art	
Galleria di Mapunendo, Milan, Italy	Three Little Girls	Puris Site, Hong Kong	The Battle around the Shield and Lance	Philadelphia Museum of Art	
Galleria di Mapunendo, Milan, Italy	The Pump of Death	Puris Site, Hong Kong	Does Man as Chef	Philadelphia Museum of Art	
Galleria di Mapunendo, Milan, Italy	Self-Portrait	Philadelphia Museum of Art	Hero Construction	Philadelphia Museum of Art	

Query#8:

```
elif query_data['onechoice'] == 'queery_8':  
    return display_function(f"""SELECT A.artistName, COUNT(A.artistID) AS Ct  
    FROM Artist AS A, Exhibit AS E, Registered AS R  
    WHERE A.artistID = R.artistID AND R.exhibitID = E.exhibitID  
    GROUP BY A.artistName  
    HAVING COUNT(A.artistID) >= 3""")
```

Query#8 Output:

artistName Ct	
Vincent van Gogh	7
Andy Warhol	5
Francis Bacon	3
Mark Rothko	4
Pablo Picasso	10
Titian	3
Asma Mohd	4
Melinda Vigh	7

Query#9:

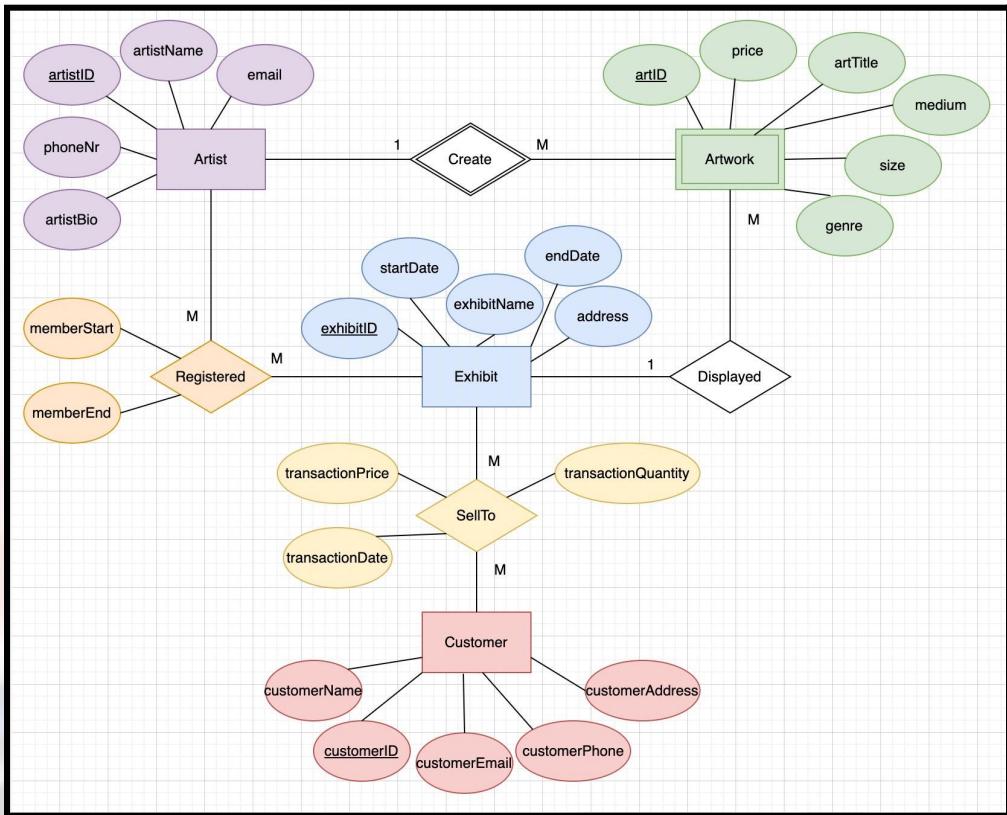
```
elif query_data['onechoice'] == 'queery_9':
    print(query_data['exhibitList'])
    return display_function(f"""SELECT A.artistID, A.artistName
        FROM Artist AS A, Exhibit AS E, Registered AS R
        WHERE A.artistID=R.artistID AND E.exhibitID=R.exhibitID AND E.exhibitName='{query_data['exhibitList']}'''")
```

E.exhibitName =

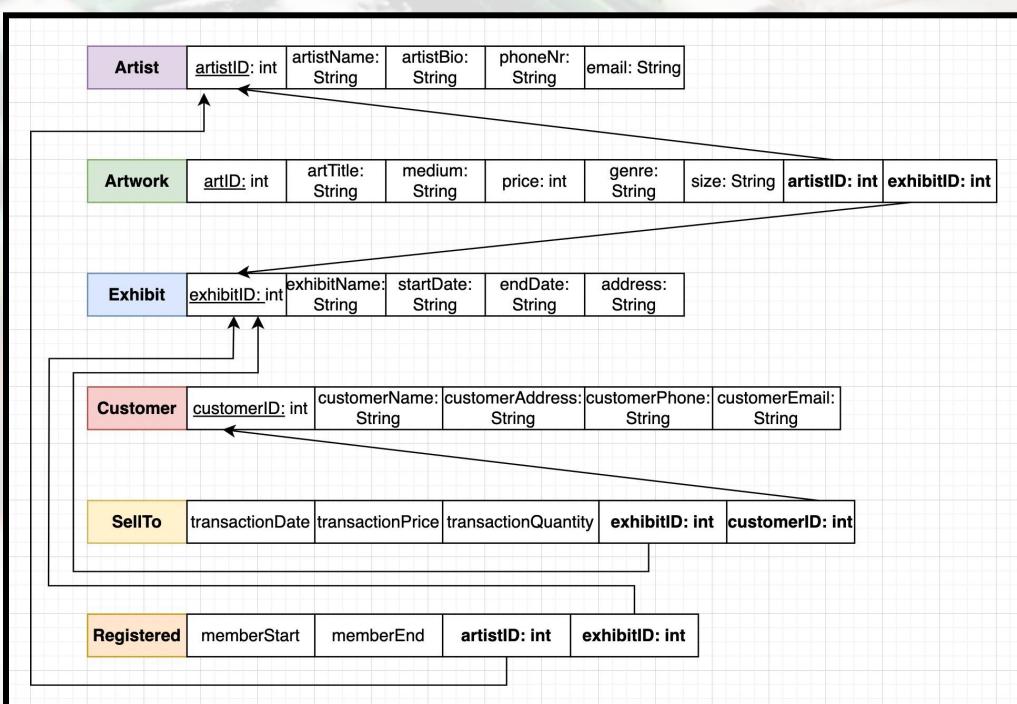
Query#9 Output:

artistID	artistName
1000007	Francis Bacon
1000016	Paul Cézanne
1000044	Andr Dunoyer de Segonzac
1000065	Camille Pissarro
1000067	Caylus Painter
1000072	Charles Franois Daubigny
1000101	Edward Clark Potter
1000139	Heinz Warneke
1000144	Hilaire Germain Edgar Degas
1000244	Oda Kazuma
1000248	Onchi Kudshir
1000294	Sir Robert Ker Porter

Modified ER Diagram:



Modified Relational Schema:



Modified Queries:

Query #2:

Display the names of Customers along with the transaction price who purchased artwork between the range of \$40,000,000-\$65,000,000

```
SELECT C.customerName, S.transactionPrice  
FROM Customer AS C, SellTo AS S  
WHERE C.customerID=S.customerID AND S.transactionPrice>=40,000,000  
      AND S.transactionPrice>=65,000,000;
```

Query #3:

Count the number of transactions with price higher than \$20,000,000 per artwork medium

```
SELECT R.medium, COUNT(S.transactionQuantity) AS TotTrans  
FROM Artwork AS R, Exhibit AS E, SellTo AS S, Customer AS C  
WHERE E.exhibitID=E.exhibitID AND E.exhibitID=S.exhibitID AND  
      S.customerID=C.customerID AND C.customerID=S.customerID  
      AND S.transactionPrice >= 20,000,000  
GROUP BY R.medium;
```

Query #7:

Display the location of the exhibit and artTitle for each artwork sorted by location

```
SELECT E.address, R.artTitle  
FROM Exhibit AS E, Artwork AS R  
WHERE E.exhibitID=R.exhibitID  
ORDER BY E.address;
```

Query #8:

Display the names of the artists who went to more than 3 exhibits

```
SELECT A.artistName, COUNT(A.artistID) AS Ct  
FROM Artist AS A, Exhibit AS E, Registered AS R  
WHERE A.artistID=R.artistID AND R.exhibitID=E.exhibitID  
GROUP BY A.artistName  
HAVING COUNT(A.artistID)>=3;
```

Query #9 (we added a 9th query):

Display the id and names of artists who have artworks registered in exhibit "Beautiful Passion"

```
SELECT A.artistID, A.artistName  
FROM Artist AS A, Exhibit AS E, Registered AS R  
WHERE A.artistID=R.artistID AND E.exhibitID=R.exhibitID AND  
E.exhibitName='Beautiful Passion';
```