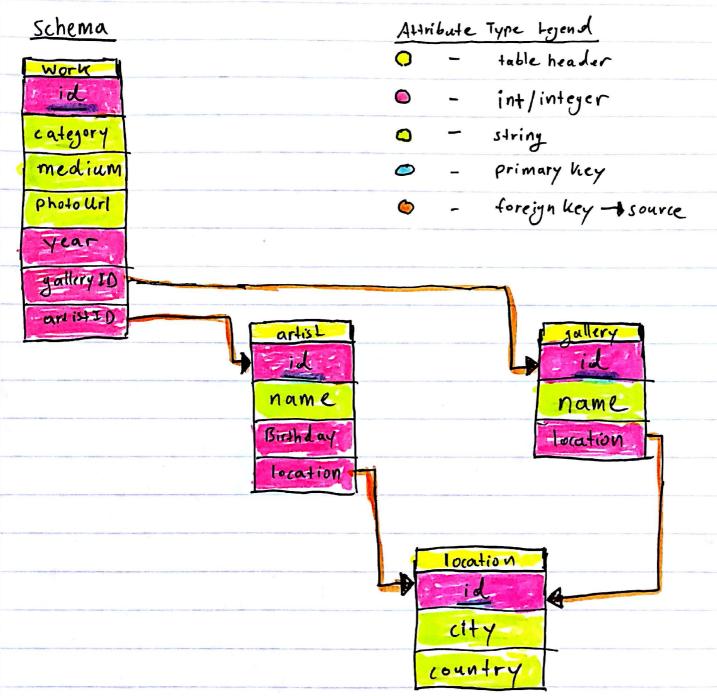
Relational Model



Relations

work (ide, contegory, medium, photollet, year, gallery ID, artist ID)
artist (ide, name, birthday, location)
gollery (ide; name, tocation)
location (ide, city, country)

Constraints & Domain

- · work
 - · lowed D: Enull, 1,2,3,...,00], unique, null implicit but not allowed
 - · category D: Erenaissance, cubist, classical, post-modern & not unique, null allowed
 - · medium D: Eclay, canvas, oil, audio, photo, martignay3, not unique, null not allowed
 - · photouri D: & http://xx.imjext } , unique, null allowed
 - · year D: & nail, 1000, 1001, ..., 2017}, not unique, null allowed
 - · Jallery ID D: Enall, 1,2,..., 53, not unique, null not allowed
 - · artist ID D: & Hall, Priasso, Frida, et 3, notunique, null allowed

· artist

- · id D: znull, 1,2,3,... and unique, null not allowed
- · name D: & null, Picasso, ..., 903 unique, null allowed
- · Birthay D: & null, 20170201, ..., 0000000 } notunique, null allowed
- · lecation D: & null 1,2,..., 03 not unique, null not allowed

· gallery

- · W D: & null, 1, 2, ..., 53 unique, null not allowed
- · name D: Enull, Louvre, etc. 3 not unique, null not allowed
- · location D: & Mall, 1,2,..., 13 3 not unique, null not allowed

· location

- · 1 D: & null, 1,2,..., B3, unique, null not oillowed
- · city D: & null, Paris, etc. 3, notunique, null not allowed
- · country D: & null, France, etc. 3, not unique, null not allowed

Normalization

- 1) work (id, category, medium, photo Url, year, gallery ID, artist ID
 - · INF
- Q. Is every element atomic?
- A. In Feterence to the constraints & Domain page, none of the domains of the attributes in work require multiple values. This means all the domains are atomic/indivisible.
- # This in INF
- · ANF
- Q. Do any non-key attributes depend on only parts of the primary key?
- A. The functional dependency is: FDI id -> category, medium, photour 1, year, gallery ID, artist ID
 - WR have a single FD. All attributes depend only on it
- / This in DUF
- · 3NF
- Q. Are there any attributes which are antecedents on a non-key attribute?
- A. id is a superkey for work
- ✓ This is insur
- · BCNF
- Q. Is there any redundancy in functional dependencies?
- A. id is a superkey for work
- 17his in BCNF

(questions are the same as those asked on pagel)

Dartist (id, name, birthday, location)

· NF

1. - In reference to the constraints & Donain Paje, none of the domains of the attributes in work require multiple values.

This means all the domains are atomic/indivisible.

This in INF

· ZNF

A. - The functional dependency is: FOI arts -> 12, name, birthday, location - Single FD. All attributes depend only on it.

This in LNF

23 NF

A. - id is a supermey for artist

Thusin 3NF

· BCNF

A. - id is a superkey for out ist

FThu is in B(NF

(3) gallery (id, nane, location) -4. - No donaids of attributes require multiplevalues. All arcialivaible. V Thu is in INF · JNF 4. - FD is: FD1 id -yname, location. Single FD. V This is in DNE OBNE 4. - id is a superkey torgallery 🛎 This is in 3NE · BONF A. - id & a suprikey son gallery Finisin BONF (4) location (id, city, country) 1NF 4. - No domains of attributes require multiplevalues. All are indivisible. # This is in INF DNF 4. - FD is: FDI id + city, country. Sigle FD V Thuin ZUF ME A. id is a superkey for location The is insuf BINE A. id is a syperkey for location

J. This is in BOUF