**B. Description**

1. In this diagram the entities are artworks, artists, customer and group.
2. Artist paints Artworks so they are connected by the relationship ‘paints’.
3. Artworks are classified in groups. They are connected by the relationship ‘classify’.
4. Customer buys Artworks so they are connected by the relationship ‘buy’. ‘buy’ has two attributes date and txn\_id.
5. A customer prefers some artists. So customer and artists are connected by the relationship ‘prefers’.
6. Customer also likes some Artwork groups so, group and Customer is connected by the relationship ‘like’.

**C. Attributes**

Artwork: {Title, Type, Year\_of\_Made, Price}

Artists: {Name , Style\_of\_Art, Age, Addrress}

Customer: {ID, C\_name, C\_address, Total\_spent}

Group: {GID ,G\_name}

Buy: {Txn\_ID , Date}

**4.Relationships**

a. Artists-Artworks (1:N) comprises.

b. Customer-Artists (N:M) comprises.

c. Customer-Artworks (1:N) comprises.

d. Customer-Group (N:M) comprises.

e. Artworks-group (M:N) holds.

**5. Relational Schema**

**Artworks:**

Artworks

<Title>

Type of art : <Type>

Year of art was made : <Year\_of\_Made>

Price of artwork : <Price>

Artist name : <Name> (Forgien key from ‘Artists’ table)

Customer id : <ID> (Forgien key from ‘Customer’ table)

Date of sold : <Date>

Transaction id : <Txn\_ID>

**Artists:**

Artists

<Name>

Artist age : <Age>

Artist address : <Address>

Style of art : <Style\_of\_Art>

**Customer:**

Customer

<ID>

Customer name : <C\_name>

Customer address : <C\_address>

Amount spent in gallery : <Total\_Spent>

**Group:**

Group

<GID>

Group name : <G\_name>

**Prefers:**

Prefers

Artist name : <Name> (Forgien key from ‘Artists’ table)

Customer id : <ID> (Forgien key from ‘Customer’ table)

**Like:**

Like

Group id : <GID> (Forgien key from ‘Group’ table)

Customer id : <ID> (Forgien key from ‘Customer’ table)

**Classify:**

Classify

Group id :<GID> (Forgien key from ‘Group’ table)

Artwork title : <Title> (Forgien key from ‘Artworks’ table)

**6. Normalization of Relational Schema**