

**Symbiosis Institute of Technology**

**A DBMS Project Report on**

**CREATIQ-ONLINE ART SYSTEM**

**Submitted by:**

***HRITUJA KHATAVKAR* 16070122020**

***RASHI DHIR* 16070122047**

***ROHAN ATHAWADE* 16070122050**

**Under the Guidance of:**

**Mrs. Shruti Patil**

**Department of Computer Science**

**SYMBIOSIS INSTITUTE OF TECHNOLOGY, PUNE**

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**INTRODUCTION:**

Art of any kind is worth being experienced by more than just the creator. A method for this to transpire is usually developed by galleries, which organize art exhibitions and auctions at a given date and place. This also unfortunately means that customers and visitors must be present at the venue in order to admire the original works of art, which must be put on display.

Often, during the run of the exhibition, customers find themselves edging towards admiring a creation so much that they wish to acquire it. For this to take place, they must first contact the manager of the gallery, ask whether it is on sale or not, then follow the complex procedure further to finally purchase the work.

On the flipside however, it is a task numerously more times difficult for the art gallery to maintain and keep a record of artistic creations, storage and availability, events being hosted, and tracking the purchases being made by customers.

It is then clearly evident that there is a dire need for a system that allows this to take place more seamlessly and without the actual hassle of having to visit a gallery to buy a painting (and often discovering that it has already been sold to someone else), or to manually keep a record of an entire gallery. At such a situation, automating the entire process, from exhibiting to selling art, can be done with the help of an Online Art System.

An Online Art System is an online website that exhibits, sells and collects art works and art pieces (not necessarily paintings exclusively). The core purpose of an Online Art System is to allow customers to explore their artistic hobbies and interests simply at home, without the trouble of having to travel back and forth between real exhibitions and auctions. While the Online Art System streamlines the process of buying a creation (paintings, sculptures and handicrafts), it also is a platform that showcases these creations in the form of real-life exhibitions and events that are organized from time to time. This same system also doubles as a software created for the organizers and handlers of the gallery as a means to maintain and preserve the gallery and its works itself by storing and analyzing metadata about the creations, exhibiting the works on the website, as well as allowing and maintaining track of the transactions that have taken place between the customer and themselves regarding a creation that was bought.

Therefore, the purpose of this project is to depict how an art gallery might employ such a system and store, organize and make use of the data that is needed for the functioning of this system. In essence, this project aims to replicate a database that captures the organizational hierarchy/complex of the data that is required in general, as well as the data that the various functions offered and their responses may demand and collect in order to fully function.

The database and its working described further is a scaled attempt in sorting data used from all perspectives, views and operation of the system from all types of users, not only restricted to customers that are willing to purchase a creation.

**PROBLEM STATEMENT:**

To provide an online platform to manage the buying, selling and storage of artistic creations provided by creators/other platforms or auctions, and to organize events to exhibit these products.

**OBJECTIVES:**

The broad objective of this system is to streamline the process of exhibiting, admiring and acquiring art pieces from at the extreme comfort of the user.

Specifically, the objective of the database and diagram depicted below is to describe and showcase the organization of the data required to run such a system in reality. The database depicts many modules, and their objectives can be understood as:

* To allow users to login to the system portal as customer, admin, etc.
* To allow users to explore paintings, sculptors or handicrafts exhibited on the website in the storage of the organizing gallery.
* To allow users to participate or register for upcoming events.
* To allow users to purchase or request a purchase of a particular item or creation.
* To allow art galleries to showcase their collections online.
* To allow art galleries to place these collections and pieces of art on sale.
* To allow art galleries to keep a record of events being organized.
* To allow art galleries to keep a record of art pieces being collected.
* To allow art galleries to keep a record of the specifications and details about the type of creation, it’s creator and its buyer or seller.
* To allow art galleries to keep a record of the total number and specifications of creations that they host, and its status.
* To allow art galleries to provide a means for customers to pay for and acquire artistic creations they wish to possess.

**FUNCTIONAL REQUIREMENTS**:

The functionality of the entire system is broadly divided between two basic working perspectives and actual applications of the system, that is, from the point of the user (that may be assumed to be either a customer or an artist/creator) and that of the gallery organizers.

Therefore, it follows that the functional requirements of the system are divided into the User Module and the Organizer Module. The functional requirements that arise from doing so are described further:

* **USER MODULE**

The user module will be used by mainly two types of users: customers and artists/creators.

* + *Customer:* 
    1. Login/Register: the user should be able to login using the portal provided or register to be a suggested type of user (customer).
    2. View creations: the user after logging in should be able to view various pieces of work provided by artists in the gallery, or all works by a particular artist/gallery.
    3. View upcoming events: the user should be able to view a list of upcoming events and exhibitions being organized.
    4. Register for events: the user should be able to register for upcoming events being organized.
    5. Pay for Creations: the user should be able to select and pay for creations they would like to possess through the payments module.
  + *Artist:*
    1. Login/Register: the artist should be able to login using the portal provided or register to be a suggested type of user (artist).
    2. View creations: the artist after logging in should be able to view various pieces of work provided by other artists in the gallery, or all works by a particular artist/gallery.
    3. View upcoming events: the artist should be able to view a list of upcoming events and exhibitions being organized.
    4. Participate in upcoming events: the artist should be able to take part in provide creations for upcoming online exhibitions and events being organized.
    5. Register for galleries: the artist should be able to register for one or more than one gallery of their choice.
    6. Submit creations: the artist should be able to submit their own creations for display at a gallery or an exhibition.
* **ORGANIZER MODULE**

The Organizer module consists of a various number of people that may use the system from the “organizational perspective”. For example, this may include the gallery manager, the events manager, creations manager, etc.

1. Login/Register: the organizer should be able to login using the portal provided or register for the same.
2. Start a gallery: the organizer should be able to start a gallery of their own post registration under which exhibitions and selling/buying of creations will be possible.
3. Upload Creations: the organizer should be able to upload creations that are new depending on the type of creation it is (sculpture, painting or handicraft).
4. Add artists to gallery: the organizer should be able to add artists to galleries.
5. Organize exhibitions: the organizer should be able to organize exhibitions or other events and upload them onto the website.
6. Accept payments: the organizer should be able to accept payments made by the customers for a given creation.
7. Queue Sold Creations: the organizer should be able to declare a creation as sold and remove it from the displayed creations.
8. Add artists to exhibitions: the organizer should be able to add participating artists to exhibitions.
9. Add customers/users to exhibitions: the organizer should be able to add registering customers/users to upcoming events and exhibitions.

**ENTITES AND RELATIONSHIPS:**

The relationships between the various entities in our database is described in the table below. The first and third column state the entities in question and the second column describes the relationship between them:

|  |  |  |
| --- | --- | --- |
| **ENTITY** | **RELATIONSHIP** | **ENTITY** |
| Gallery | A gallery can have multiple artists whose creations are on exhibition and sale from their side. | Artist |
| Gallery | A gallery may organize multiple exhibitions, but a particular exhibition belongs to one gallery only. | Exhibition |
| Artist | An artist may create multiple creations, but a creation belongs to only one artist. | Creation |
| Artist | An artist can participate in multiple exhibitions, and an exhibition can host multiple artists’ work. | Exhibitions |
| Creation | A creation can be of any type; either in the form of a painting, sculpture or handicraft, but one these is all essentially a singe creation. | Painting,Sculpture, Handicraft |
| Creation | Multiple creations can be bought by a single user, and a single user can own a single creation. | User |
| User | A single user may pay using the payments portal, and a payment belongs to only one user. | Payment |
| User | A single user has a singular set of login credentials at the login portal, but the login portal has many users. | Login |
| User | A user may register to many exhibitions, and an exhibition may have many users registering. | Exhibition |

**E-ER DIAGRAM:**

E:\DBMS project\final ER.png

**RELATIONAL SCHEMA:**

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **EXHIBITION** |  |  |  |  |  |  |  |  |
| **e\_id** | e\_name | location | e\_type | start\_date | end\_date | location | *u\_id* | *cr\_id* |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **GALLERY** |  |  |  |  |
| **g\_id** | g\_name | g\_url | location | *e\_id* |

|  |  |
| --- | --- |
| **ORGANIZE** |  |
| *e\_id* | *g\_id* |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **ARTIST** |  |  |  |  |
| **a\_id** | a\_name | address | phone\_no | *cr\_id* |

|  |  |
| --- | --- |
| **PARTICIPATE** |  |
| *e\_id* | *p\_id* |

|  |  |
| --- | --- |
| **CREATES** |  |
| *a\_id* | *cr\_id* |

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **PAINTING** |  |  |  |  |  |  |
| **pr\_id** | p\_name | *cr\_id* | *a\_id* | p\_type | price | a\_name |

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **SCULPTURE** |  |  |  |  |  |  |
| **s\_id** | s\_name | *cr\_id* | *a\_id* | s\_type | price | a\_name |

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **HANDICRAFT** |  |  |  |  |  |  |
| **h\_id** | h\_name | *cr\_id* | *a\_id* | s\_type | Price | a\_name |

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **USER** |  |  |  |  |  |
| **u\_id** | u\_name | u\_type | *cr\_id* | *e\_id* | phone\_no |

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **LOGIN** |  |  |  |  |  |
| **u\_name** | u\_type | email | password | phone\_no |
|  |  |  |  |  |  |
| **PAYMENT** |  |  |  |  |  |
| **py\_id** | py\_mode | *cr\_id* | *u\_id* | amount |  |

|  |  |
| --- | --- |
| **VISITS** |  |
| *e\_id* | *u\_id* |

|  |  |
| --- | --- |
| **BOUGHT\_BY** |  |
| *cr\_id* | *u\_id* |

|  |  |
| --- | --- |
| **LOGS\_IN** |  |
| *u\_id* | *Email* |

|  |  |
| --- | --- |
| **PAYS** |  |
| *u\_id* | *py\_id* |

|  |  |
| --- | --- |
| **HAVE** |  |
| *a\_id* | *g\_id* |

|  |  |
| --- | --- |
| **IS\_A** |  |
| **spec\_id** | spec\_name |

**BOLD** => primary key

*ITALICS* => foreign key