AMERICAN INTERNATIONAL UNIVERSITY-BANGLADESH
Faculty of Science and Technology

Project Cover Page

Assignment Title:	**Online Art Gallery Management System**

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Course Title:	ADVANCE DATABASE MANAGEMENT SYSTEM

Course Code:	CSC4181	Section:	A

Semester:	Spring	2022-23	Course Teacher:	REZWAN AHMED

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Contents

Oracle Database:

Here we create an admin portal and for storing admin information we created this database 'Admin' in oracle.

Here is our registration page

Registration

All Values are Required(*)

First Name: [Enter your first name]*
Last Name: [Enter your last name]*
Age: [Enter your age]*
City: [Enter your city]*
Street: [Enter your Street]*
Gender: ○ Male ○ Female ○ Others*
Phone Number: [Enter your phone number]*
Email: [Enter your email]*
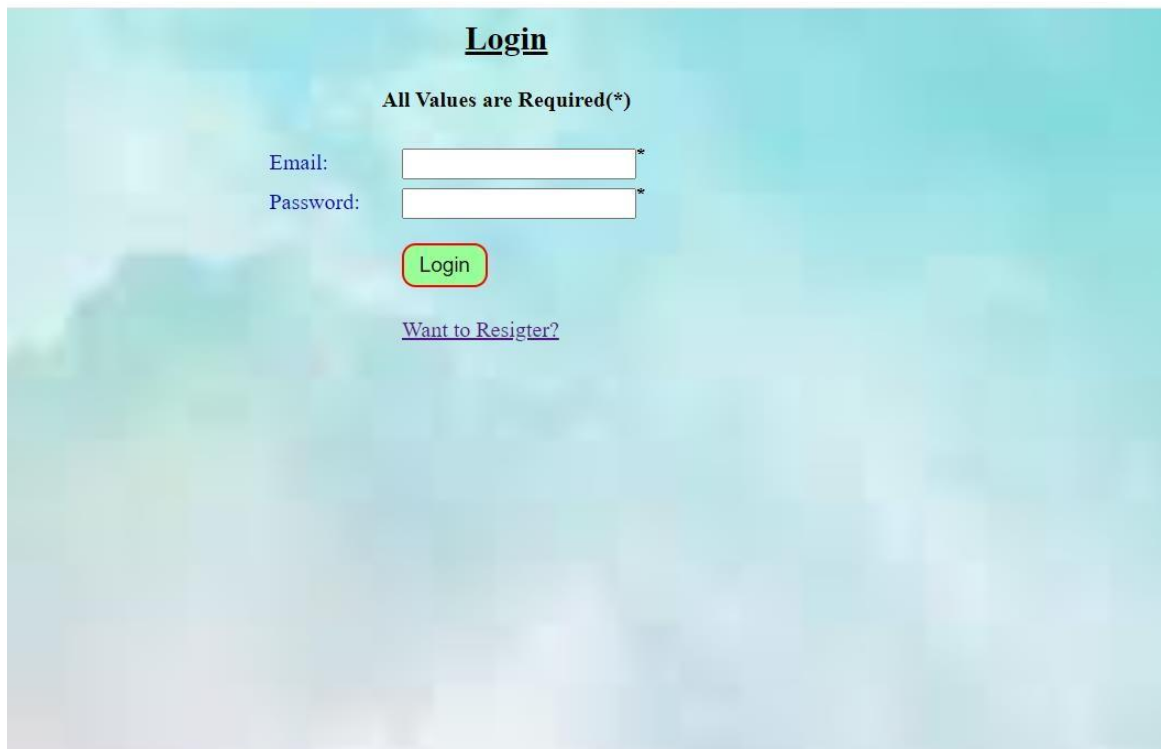Password: [Enter an strong password]*

[Submit] [Reset]

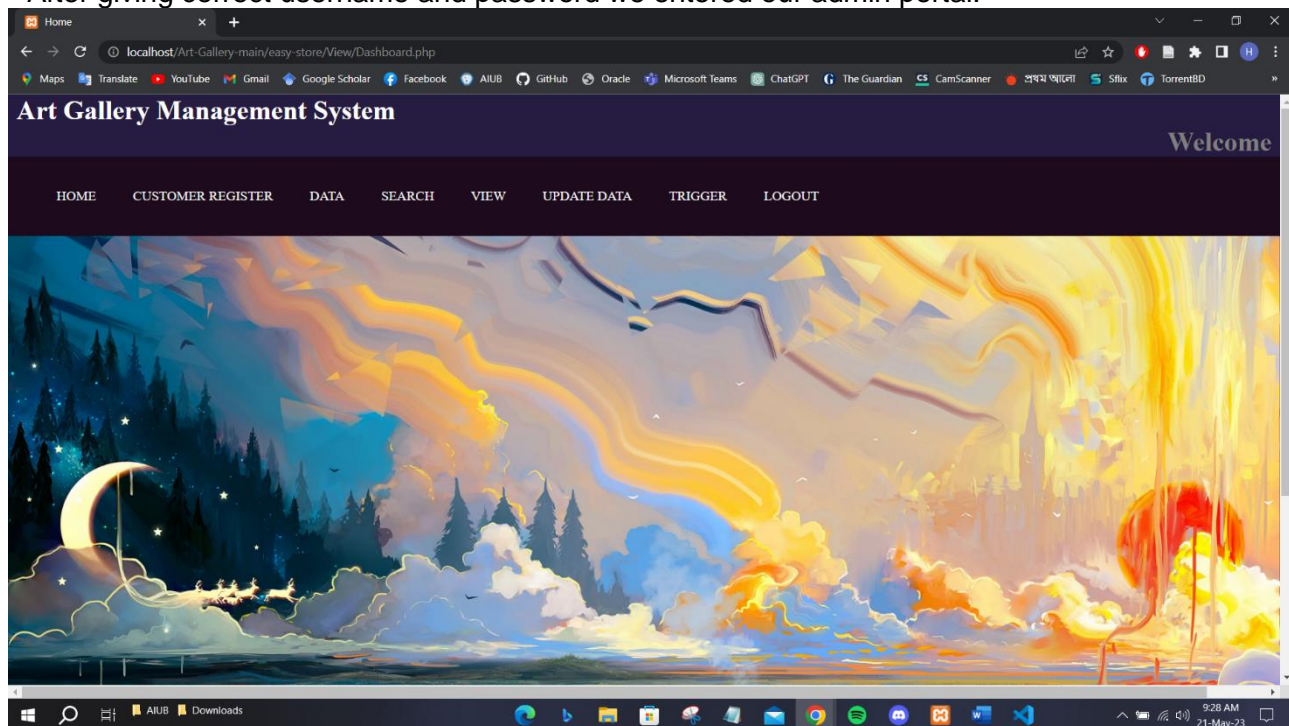**Already Have an Account?**

Login here

After register we have to login through this interface

Login

All Values are Required(*)

Email: [   ] *

Password: [   ] *

[Login]

Want to Resigter?

Admin portal:

After giving correct username and password we entered our admin portal.

Interface Communicate with Database:

Now we will show this data in admin panel.

Art Gallery Management System

Welcome

HOME | CUSTOMER REGISTER | DATA | SEARCH | VIEW | UPDATE DATA | TRIGGER | LOGOUT

Table View From Oracle

Employee:

Employee Id	First Name	Last Name	Gender	Email	Password	Phone Number	Hiredate	Job Id	Location Id
501	James	Doe	Male	john.doe@example.com	password1	1234567890	2022-01-01	101	1
502	Jane	Smith	Female	smith@example.com	password2	2345678901	2022-02-01	102	1
503	Michael	Johnson	Male	johnson@example.com	password3	3456789012	2022-03-01	103	2

Admin:

Admin Id	First Name	Last Name	Gender	Email	Password	Phone Number	Location Id	Age
4	Rinki	Pinki	22	Female	eram@gmail.com	Pi01234@	01514789452	103

Job:

Job Id	Job Title	Salary
100	Manager	150000
101	Artist	80000
102	Artist	80000
103	Artist	80000
104	Staff	15000

Location:

Location Id	City	Street
100	Dhaka	West
101	Dhaka	West
102	Dhaka	West
103	Khulna	Open
104	Rangpur	St.
1	New York	Broadway
2	London	Oxford Street
3	Paris	Champs-Elysees
4	Tokyo	Shibuya
5	Sydney	George Street

Product:

Product Id	Product Name	Quantity	Cost Price	Sell Price	Catagory Id
1	Sunflower Painting	10	100	200	1
2	Marble Sculpture	5	500	1000	2
3	Landscape Photo	15	50	100	3
4	Abstract Print	8	80	150	4
5	Mixed Media Collage	12	200	400	5

Catagory:

Catagory Id	Catagory Name
1	Paintings
2	Sculptures
3	Photography
4	Prints
5	Mixed Media

1	Paintings
2	Sculptures
3	Photography
4	Prints
5	Mixed Media

Customers:

Customer id	First name	Last Name	Phone Number
500	Johan	Peg	01234567897
1	John	Doe	1234567890
2	Jane	Smith	2345678901
3	Michael	Johnson	3456789012
4	Emily	Davis	4567890123
5	David	Wilson	5678901234

Supplier:

Supplier id	Supplier Name	Supplier phone	Company name	Location id
1	ABC Suppliers	1234567890	ABC Company	1
2	XYZ Suppliers	2345678901	XYZ Company	2
3	DEF Suppliers	3456789012	DEF Company	1
4	GHI Suppliers	4567890123	GHI Company	3
5	JKL Suppliers	5678901234	JKL Company	2

Purchase:

Purchase id	Product id	Quantity	Supplier id	Employee id	Amount
1	1	15	1	501	1000
2	2	3	2	502	3000
3	3	4	3	503	500

Searching and advance searching(sql):

We make some sql searching query to get some specific data from Oracle.

Find out the second highest price's product details.

Product Id	Product Name	Quantity	Cost Price	Sell Price	Catagory Id
5	Mixed Media Collage	12	200	400	5

Find the employees who purchase products most.

Employee Id	First Name	Last Name	Gender	Email	Password	Phone Number	Hiredate	Job Id	Location Id
501	James	Doe	Male	john.doe@example.com	password1	1234567890	2022-01-01	101	1

Find those employees whose city same as John and Salary same as Michael.

Employee Id	First Name	Last Name	Gender	Email	Password	Phone Number	Hiredate	Job Id	Location Id	Job Title	Salary	City	Street

Find most junior employee's salary

Salary
80000

Find those products with catagory which have less cost price than Bread.

Product Id	Product Name	Quantity	Cost Price	Sell Price	Catagory Id	Catagory Name

Find those maximum employees who join the same time.

Employee Id	First Name	Last Name	Gender	Email	Password	Phone Number	Hiredate	Job Id	Location Id
503	Michael	Johnson	Male	johnson@example.com	password3	3456789012	2022-03-01	103	2
501	James	Doe	Male	john.doe@example.com	password1	1234567890	2022-01-01	101	1
502	Jane	Smith	Female	smith@example.com	password2	2345678901	2022-02-01	102	1

Find the product which has maximum profit.

Product Id	Product Name	Quantity	Cost Price	Sell Price	Catagory Id
2	Marble Sculpture	5	500	1000	2

Employee Id	First Name	Last Name	Gender	Email	Password	Phone Number	Hiredate	Job Id	Location Id
501	James	Doe	Male	john.doe@example.com	password1	1234567890	2022-01-01	101	1

Find those employees whose city same as John and Salary same as Michael.

Employee Id	First Name	Last Name	Gender	Email	Password	Phone Number	Hiredate	Job Id	Location Id	Job Title	Salary	City	Street
501	James	Doe	Male	john.doe@example.com	password1	1234567890	2022-01-01	101	1	Artist	80000	New York	Broadway
502	Jane	Smith	Female	smith@example.com	password2	2345678901	2022-02-01	102	1	Artist	80000	New York	Broadway

Find most junior employee's salary

Salary
80000

Find those products with catagory which have less cost price than Marble Sculpture.

Product Id	Product Name	Quantity	Cost Price	Sell Price	Catagory Id	Catagory Name
1	Sunflower Painting	10	100	200	1	Paintings
3	Landscape Photo	15	50	100	3	Photography
4	Abstract Print	8	80	150	4	Prints
5	Mixed Media Collage	12	200	400	5	Mixed Media

Find those maximum employees who join the same time.

Employee Id	First Name	Last Name	Gender	Email	Password	Phone Number	Hiredate	Job Id	Location Id
503	Michael	Johnson	Male	johnson@example.com	password3	3456789012	2022-03-01	103	2
501	James	Doe	Male	john.doe@example.com	password1	1234567890	2022-01-01	101	1
502	Jane	Smith	Female	smith@example.com	password2	2345678901	2022-02-01	102	1

Find the product which has maximum profit.

Product Id	Product Name	Quantity	Cost Price	Sell Price	Catagory Id
2	Marble Sculpture	5	500	1000	2

Apply sequence in 2table:

We created 2 sequence for applying in 2 tables.
Sequence code:
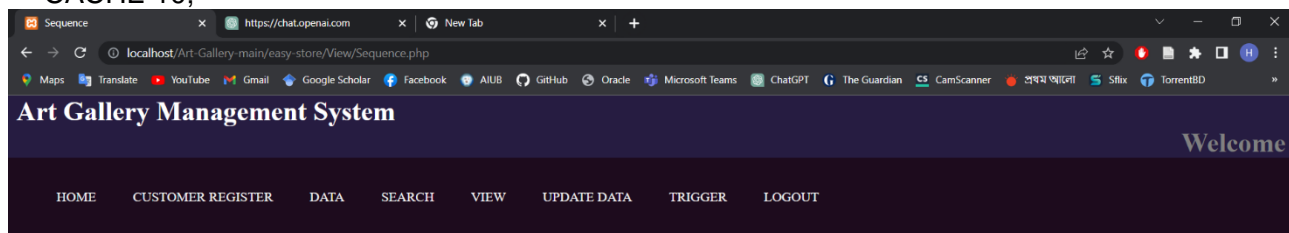
```
CREATE SEQUENCE seq_customer
  MINVALUE 500
  MAXVALUE 999999999999999999999999999
  START WITH 500
  INCREMENT BY 1
  CACHE 10;

CREATE SEQUENCE seq_loc
  MINVALUE 100
  MAXVALUE 999999999999999999999999999
  START WITH 100
  INCREMENT BY 1
  CACHE 10;
```


Here We didn't give insert id for customer and location table. That will insert automatically through sequence.

View:

In here we created 4 views.

1. Create a view sales_view for showing sales information with customer and product details.
Ans:create view sales_view as select s.sales_id,p.p_name,s.quantity,p.sell_price,s.total_amount,c.c_fname,c.c_lname,c.c_phn from sales s, product p, customer c where s.p_id=p.p_id and s.c_id=c.c_id;

2.Create a view product_discount based on product table to get 5% discount for all products.
Ans:create view product_discount as select p_id, p_name, quantity, cost_price, sell_price, (sell_price*0.05) as discount from product;

3. Create a view manager_new_salary based on job table to get 15% salary increase for manager.
Ans:create view manager_new_salary as select job_id,job_title, (salary+salary*0.15) as New_Salary from job where job_title='Manager';

4. Create a view supplier_company for showing supplier companies location details.
Ans:create view supplier_company as select s.company_name,l.city,l.street from supplier s,location l where s.loc_id=l.loc_id;

View

Create a view sales_view for showing sales information with customer and product details.

Sales Id	Product Name	Quantity	Sale Price	Total Amount	Customer First Name	Last Name	Phone Number
1	Sunflower Painting	2	200	400	John	Doe	1234567890
2	Landscape Photo	5	100	100	Jane	Smith	2345678901
3	Mixed Media Collage	3	400	900	Michael	Johnson	3456789012

Create a view product_discount based on product table to get 5% discount for all products.

Product Id	Product Name	Quantity	Cost Price	Sell Price	Discount
1	Sunflower Painting	10	100	200	10
2	Marble Sculpture	5	500	1000	50
3	Landscape Photo	15	50	100	5
4	Abstract Print	8	80	150	7.5
5	Mixed Media Collage	12	200	400	20

Create a view manager_new_salary based on job table to get 15% salary increase for manager.

Job Id	Job Title	Salary
100	Manager	172500

Create a view supplier_company for showing supplier companies location details.

Company name	City	Sreet
ABC Company	New York	Broadway
XYZ Company	London	Oxford Street
DEF Company	New York	Broadway
GHI Company	Paris	Champs-Elysees
JKL Company	London	Oxford Street

Procedural and Function:

We created 3 packages and in this packages we created total 3 procedures and 4 functions and so many exceptions.

```
create or replace package easy_store1 as
procedure emp_sal_up(eno employee.e_id%type,esal job.salary%type);
end easy_store1;


create or replace package body easy_store1
as

function validEmpId(eno in employee.e_id%type)
return boolean
```

end easy_store1;

****

create or replace package easy_store3 as
procedure insert_sale(sid sales.sales_id%type,pid sales.p_id%type,qan sales.quantity%type,eid
sales.e_id%type,cid sales.c_id%type,tamount sales.total_amount%type);
end easy_store3;

create or replace package body easy_store3

as

```
function isValidCustomerId(cid in customer.c_id%type)
return boolean
is
cid_count sales.c_id%type;
begin
select count(*) into cid_count from customer where c_id=cid;
if cid_count=0 then
return false;
else return true;
end if;
end isValidCustomerId;

function validEmpId(eno in employee.e_id%type)
return boolean
is
eid_count employee.e_id%type;
begin
select count(*) into eid_count from employee where e_id=eno;
if eid_count=0 then
return false;
else return true;
end if;
end validEmpId;

function validProId(pno in product.p_id%type)
return boolean
is
pid_count product.p_id%type;
begin
select count(*) into pid_count from product where p_id=pno;
if pid_count=0 then
return false;
else return true;
end if;
end validProId;

function haveProductQuantity(pno in product.p_id%type,quan in product.quantity%type)
return boolean
is
quant product.quantity%type;
begin
```

```
select quantity into quant from product where p_id=pno;
if quant<quan then
return false;
else return true;
end if;
end haveProductQuantity;

procedure insert_sale(sid sales.sales_id%type,pid sales.p_id%type,qan sales.quantity%type,eid
sales.e_id%type,cid sales.c_id%type,tamount sales.total_amount%type)
is
inval_sid exception;
inval_pro exception;
inval_qan exception;
inval_eid exception;
inval_cid exception;

begin
if sid <=0 then
raise inval_sid;
elsif validProId(pid) = FALSE then
raise inval_pro;
elsif haveProductQuantity(pid,qan)= FALSE then
raise inval_qan;
elsif validEmpId(eid)= FALSE then
raise inval_eid;
elsif isValidCustomerId(cid)= FALSE then
raise inval_cid;
else
insert into sales values(sid,pid,qan,eid,cid,tamount);
end if;
exception
when inval_sid then
raise_application_error(-20202,'Invalid Saled Id!');
when inval_pro then
raise_application_error(-20202,'Porduct does not exist!');
when inval_qan then
raise_application_error(-20202,'Product quantity does not available!');
when inval_eid then
raise_application_error(-20202,'Employee id does not exist!');
when inval_cid then
raise_application_error(-20202,'Customer Id does not exist!');
when others then
raise_application_error(-20202,'Something went wrong');
end insert_sale;
```

```
end easy_store3;
```
****
```
create or replace package easy_store2 as
procedure delete_customer(cid customer.c_id%type);
end easy_store2;

create or replace package body easy_store2
as
function isValidCustomerId(cid in customer.c_id%type)
return boolean
is
cid_count sales.c_id%type;
begin
select count(*) into cid_count from customer where c_id=cid;
if cid_count=0 then
return false;
else return true;
end if;
end isValidCustomerId;

function isAvailableCustomerForSale(cid in sales.c_id%type)
return boolean
is
cid_count sales.c_id%type;
begin
select count(*) into cid_count from sales where c_id=cid;
if cid_count=0 then
return false;
else return true;
end if;
end isAvailableCustomerForSale;

procedure delete_customer(cid customer.c_id%type)
is
inval_cus exception;
availableCustomerForSale exception;

begin
if isAvailableCustomerForSale(cid) then
raise availableCustomerForSale;
elsif isValidCustomerId(cid) then
delete from customer where c_id=cid;
else
```

```
raise inval_cus;
end if;
exception
when availableCustomerForSale then
raise_application_error(-20202,'Customer is already included for sales invoice');
when inval_cus then
raise_application_error(-20202,'Customer does not exists!');
when others then
raise_application_error(-20202,'Something went wrong');
end delete_customer;

end easy_store2;
```

Trigger:

We created 4 trigger in oracle:

`1.` `Insert a negative value of product quantity to check trigger`

.

Answer:

```
create or replace trigger purchase_quantity_trigger
before insert or update of quantity on purchase
for each row
begin
if :new.quantity <0
then raise_application_error(-20201,'Product Quantity can't be negative');
end if;
end;
```

`2.` `Creating a trigger to automatically store employee  salary update information in a table to identify when and how much salary increased`

Answer:

```
create table emp_sal_uplog(

  eno number not null,
  old_sal varchar(20) not null,
  new_sal varchar(20) not null,
  datee date not null
  );

  create or replace trigger emp_sal_up
  after update of salary on job
  for each row
  Begin
insert into emp_sal_uplog values(:old.job_id,:old.salary,:new.salary,sysdate);end;
```

3. Creating a trigger to automatically check employee table to identify when, who and what operations done in this table.

Answer:

```
create table emp_dml_log(

 user_name varchar(100) not null,
 opt_name varchar(100) not null,
 opt_date date not null


);
create or replace trigger emp_dml
after insert or update or delete on employee
declare
o_name varchar(30);
begin
if inserting then
o_name:= 'insert operation done';
elsif updating then
o_name:= 'update operation done';
elsif deleting then
o_name:= 'delete operation done';
end if;
insert into emp_dml_log VALUES(user, o_name, sysdate);
end;
```

`4.` `Creating a trigger to check that DML operation can't be happened/done on sales`
`table after office hour.`

Answer:
create or replace trigger sales_secure
before insert or update or delete on sales
begin
if to_char(sysdate,'DY') in ('FRI','SAT')
or to_char(sysdate,'HH24') not between '08' and '17' then
raise_application_error(-20201, 'Sorry try again later in office hour');
end if;
end;