

TEAM ID 6

ASSIGNED TA: RADWA MOUSTAFA



PROPERTY FINDER

DBMS PROJECT - PHASE 2

TEAM MEMBERS:

- سيف الدين حاتم احمد محمد - 2021170814 - SOFTWARE
- مريم علاءالدين محمود الزهار - 2021170833 - SOFTWARE
- احمد مصطفى ايمن عبدالفتاح أبوالاسعاد - 2021170843 - AI

- محمود سيد محمود عابدين - 2021170832 - AI
- دينا سعيد محمد محمود - 2021170951 - BIO
- محمد شريف عبد الصادق صفا - 2021170954 - BIO
- ملك خالد حافظ احمد خطاب - 2021170955 - BIO

DESCRIPTION:

What is Property Finder?

Property finder is the Leading Real Estate Marketplace. It allows the client to Search Over 100K Listings of properties for Sale And Rent. It allows agents to offer available properties and enables the users to search and find their ideal property that meets their needs. Users can also report issues that belong to specific properties and also favor a property that matches their needs.

For the Property Finder Database System, there are four major canvases:

- Properties Canvas
- Agents Canvas
- Search Canvas
- Reports Canvas

IMPLEMENTING TABLES USING SQL:

To create these canvases, we create the database tables in this order:

- 1.Agent_
- 2.Agent_Phone
- 3.User_
- 4.User_Phone
- 5.Property
- 6.Report_Data
- 7.Report
- 8.Search
- 9.Favorites

Also, we created a sequence to increase the RID number.

10. RID_SEQUENCE

As well as we considered these assumptions in the creation process:

- The Same ssn can be used in 2 different accounts if one of them is agent acc. and the other is user ACC.
- It's not allowed to create a report many times if the report has the same (ssn, ref, category, and different comments)

SQL code:

```
/*_____Start of Tables Creation_____*/
```

```
/*_____Agent_____*/
```

```
create table Agent_ (  
  Agent_SSN      number(14) constraint AS_PK primary key constraint AS_CH  
  check (Agent_SSN between 20000000000000 and 40000000000000),  
  email char(30) constraint AE_NN not null constraint AE_UK unique,  
  password_   varchar(20) constraint APW_NN not null,  
  First_Name  char(20) constraint AFN_NN not null,  
  Middle_Name char(20) constraint AMN_NN not null,  
  Last_Name   char(20) constraint ALN_NN not null  
);
```

```
create table Agent_Phone(  
  Agent_SSN      number(14) constraint ASSN_FK references  
  Agent_(Agent_SSN),  
  Phone          varchar2(14) constraint AP_UK unique,  
  Constraint A_P_CMP Primary Key(Agent_SSN, Phone)  
);
```

/* _____User_____ */

```
create table User_ (  
  User_SSN      number(14) constraint US_PK primary key constraint US_CH  
check (User_SSN between 20000000000000 and 40000000000000),  
  email         char(30)  constraint UE_NN not null constraint UE_UK unique,  
  password_     varchar(20) constraint UPW_NN not null,  
  First_Name    char(20)  constraint UFN_NN not null,  
  Middle_Name   char(20)  constraint UMN_NN not null,  
  Last_Name     char(20)  constraint ULN_NN not null );
```

```
create table User_Phone (  
  User_SSN      number(14) constraint USSN_FK references User_(User_SSN),  
  User_Phone    varchar2(14) constraint UP_UK unique,  
  constraint U_P_CMP primary key (User_SSN, User_Phone) );
```

/* _____Property_____ */

```
create table PROPERTY(  
  Reference_    varchar2(15) constraint R_PK PRIMARY KEY ,  
  Location_     varchar2(80) constraint L_NN not null,  
  Price         number(10) constraint P_NN not null constraint P_CH check (price  
> 0),  
  area         number(5)  constraint A_NN not null,  
  Num_Rooms     number(2)  constraint NR_NN not null,  
  Num_Toilets   number(1) constraint NT_NN not null,  
  Description   varchar2(800),  
  Status       char(9)   constraint Stt_NN not null,  
  Listing_Date  date,  
  Listed_for    number(4),  
  Property_Type char(20) constraint PT_NN not null,  
  Agent_SSN     number(14) constraint AS_FK references Agent_(Agent_SSN),  
  Offer_Type    char(12)  constraint OT_NN not null );
```

/*_____Other_____*/

```
create table Search(  
  User_SSN    number(14) constraint S_SSN_FK references User_(User_SSN),  
  Search_Query varchar2(50),  
  Query_Date  date,  
  constraint SSN_SQ_CMP primary key(User_SSN, Search_Query, Query_Date) );
```

```
create table REPORT_DATA(  
  RID        number(10) constraint RID_PK primary key,  
  REP_Date   date,  
  category_  varchar2(40) constraint C_NNnot null );
```

```
create table REPORT(  
  USER_SSN    number(14) constraint R_SSN_FK references USER_(User_SSN),  
  Reference_  varchar2(15) constraint R_REF_FK references  
Property(Reference_),  
  RID        number(10) constraint RID_FK references REPORT_DATA(RID),  
  Category_  varchar2(40) constraint CA_NN not null,  
  Comment_   varchar2(500) not null,  
  constraint SSN_REF_C_CMP primary key(USER_SSN, Reference_,RID) );
```

```
create table FAVORITES(  
  USER_SSN    number(14) constraint F_SSN_FK references User_(User_SSN),  
  Reference_  varchar2(15) constraint F_REF_FK references  
Property(Reference_),  
  constraint SSN_REF_CMP primary key(USER_SSN, Reference_) );
```

/*_____End Of Tables_____*/

```
/* _____Sequence_____ */  
create sequence RID_SEQ  
start with 1  
increment by 1  
maxvalue 9999999999  
/* _____End of sequence _____ */
```

```
/* _____Modification_____ */  
ALTER TABLE user_phone MODIFY user_phone VARCHAR(11) NOT NULL;
```

```
alter table property  
drop column listed_for;
```

```
ALTER TABLE AGENT_  
ADD Gender char(1);
```

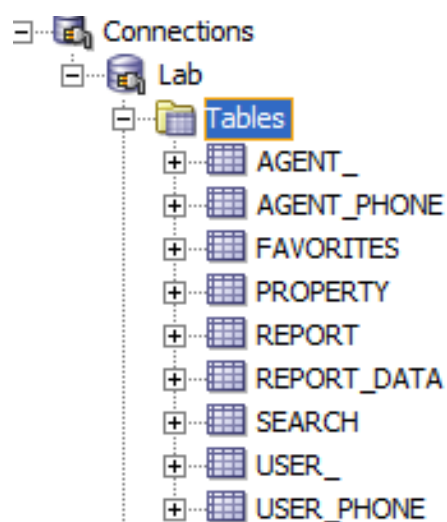
```
ALTER TABLE USER_  
ADD Gender char(1);
```

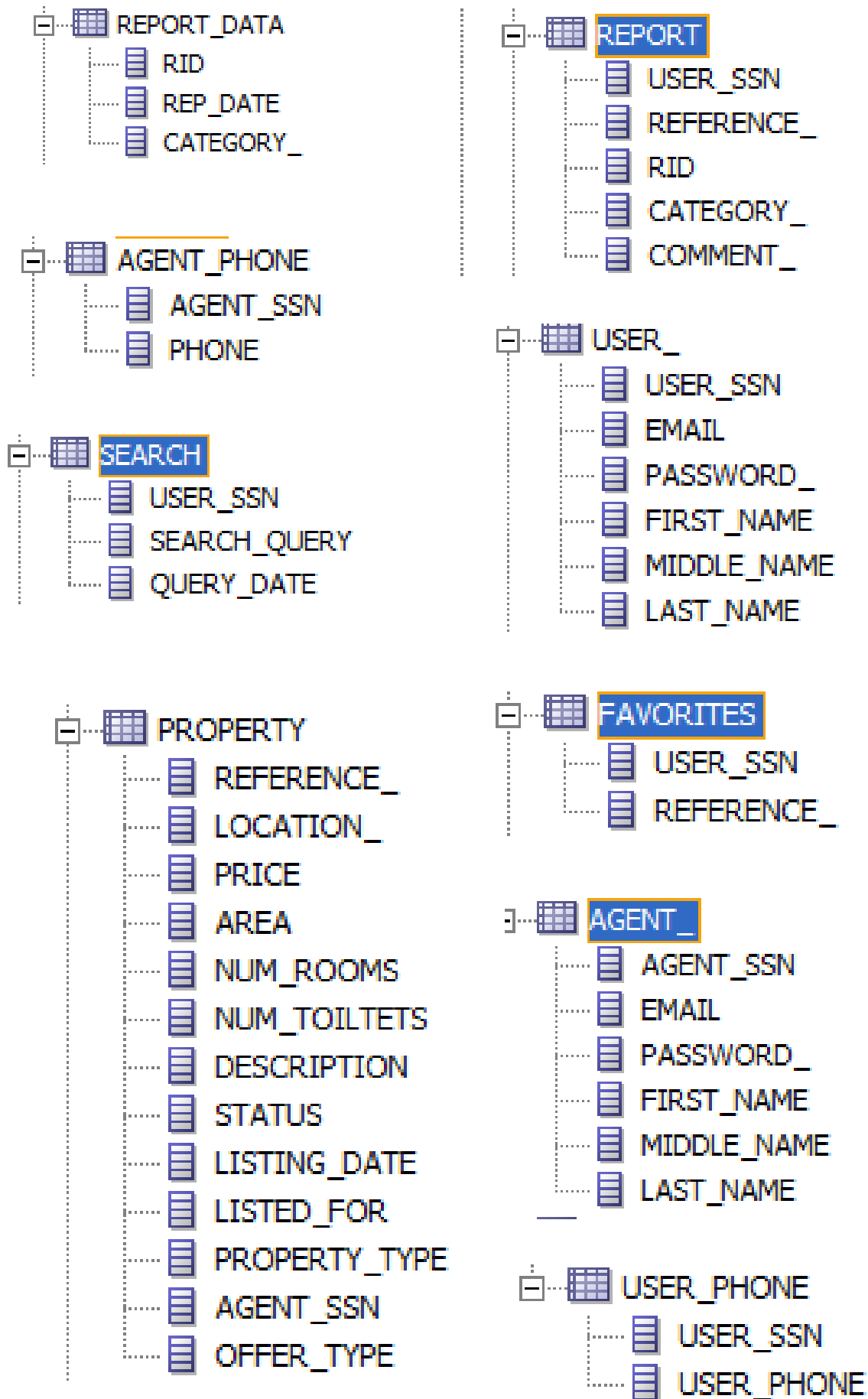
```
/* _____End of Modification _____ */
```

Source code file:

<https://drive.google.com/file/d/1mIKaUYwHkwTul9vevHydAHKf7IlIaXhIH/view?usp=sharing>

Screenshots for tables implementations:





FORM CREATION:

1- IMPLEMENTING USER/SEARCH CANVAS:

This canvas includes blocks related to the User & Search tables.

This canvas utilizes the following:

- radio button
- triggers
- master detail

Screenshots for User/Search Canvas:

The screenshot shows the Oracle User/Search Canvas form. The top menu bar includes Action, Edit, Query, Block, Record, Field, Help, and Window. The form is divided into several sections:

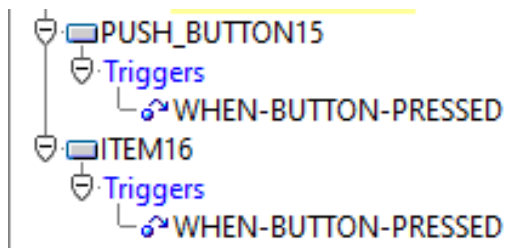
- User Information:** Fields for User Ssn (200000000000003), Email (User2@gmail.com), Password (d9j1012), First Name (Mariam), Middle Name (Alaa), Last Name (Mahmoud), and Gender (Male/Female).
- Phone Number(s):** A section for User Phone with a value of 01049494949.
- Search History:** A table with columns Search Query and Query Date.

Search Query	Query Date
Alex	21-DEC-2022
Alexandria	21-DEC-2005
Alexandria	14-JUL-2006

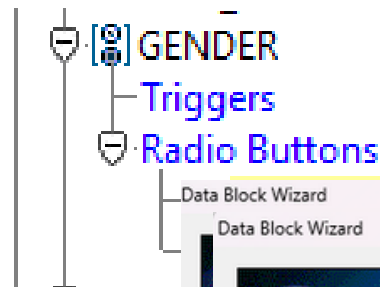
The screenshot shows the User Data form. The top section is labeled "User Data" and contains fields for User Ssn, Email, Password, First Name, Middle Name, Last Name, and Gender (Male/Female). Below this is a section for "Phone Number(s)" with a "User Phone" field. At the bottom is a "Search History" section with a table.

Search Query	Query Date
SEARCH_QUERY	QUERY_DATE
SEARCH_QUERY	QUERY_DATE
SEARCH_QUERY	QUERY_DATE

Buttons:



Gender:



General
Name
Subclass Information
Comments
Functional
Enabled
Label
Access Key
Radio Button Value

General
Name
Subclass Information
Comments
Functional
Enabled
Label
Access Key
Radio Button Value

Data Block Wizard

You may optionally create and delete master-detail relationships to other data blocks in your form.

Create Relationship...

Auto-join data blocks ☒

Delete Relationship

Master Data Blocks

USER

Detail Item

USER_SSN

Master Item

USER_SSN

Join Condition

SEARCH1.USER_SSN = USER_USER_SSN

Cancel Help < Back Next > Finish

Oracle Forms Builder - C:\Users\mah...
File Edit View Layout Program Debug Tools Window Help
Find:
Item: GENDER
General
Name: GENDER
Item Type: Radio Group
Subclass Information
Comments
Help Book Topic
Functional
Access Key
Mapping of Other Values
Implementation Class
Popup Menu: <Null>
Navigation
Keyboard Navigable: Yes
Mouse Navigate: Yes
Previous Navigation Item: <Null>
Next Navigation Item: <Null>
Data
Data Type: Char
Data Length Semantics: BYTE
Maximum Length: 1
Initial Value: M
Copy Value from Item

user to search join condition

Data Block Wizard

You may optionally create and delete master-detail relationships to other data blocks in your form.

Create Relationship...

☒ Auto-join data blocks

Delete Relationship

Master Data Blocks

USER

Detail Item

USER_SSN

Master Item

USER_SSN

Join Condition

SEARCH1.USER_SSN = USER_USER_SSN

Cancel Help < Back Next > Finish

user to user_phone joining condition:

Data Block Wizard

You may optionally create and delete master-detail relationships to other data blocks in your form.

Create Relationship...

☒ Auto-join data blocks

Delete Relationship

Master Data Blocks

USER

Detail Item

USER_SSN

Master Item

USER_SSN

Join Condition

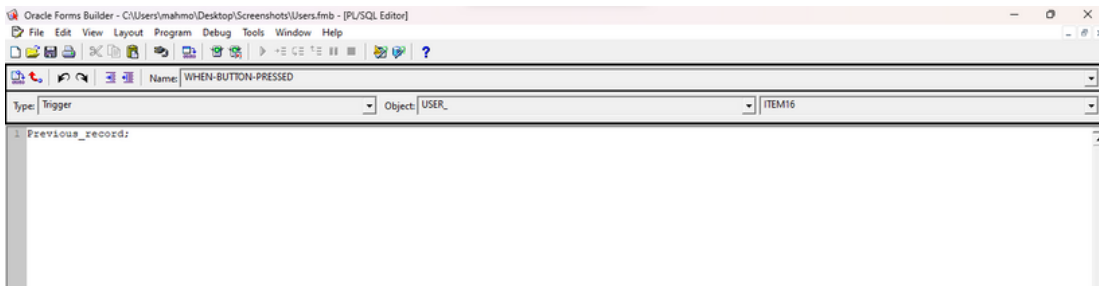
USERS_PHONES1.USER_SSN = USER_USER_SSN

Cancel Help < Back Next > Finish

Next record button 1:

General	
Name	PUSH_BUTTON15
Item Type	Push Button
Subclass Information	
Comments	
Help Book Topic	
Functional	
Enabled	Yes
Label	Next Record
Access Key	
Implementation Class	
Iconic	No
Icon Filename	
Default Button	No
Popup Menu	<Null>

Previous record button 1&2:



General	
Name	ITEM16
Item Type	Push Button
Subclass Information	
Comments	
Help Book Topic	
Functional	
Enabled	Yes
Label	Previous Record
Access Key	
Implementation Class	
Iconic	No
Icon Filename	
Default Button	No
Popup Menu	<Null>
Navigation	
Keyboard Navigable	Yes

The source file of canvas .fmb:

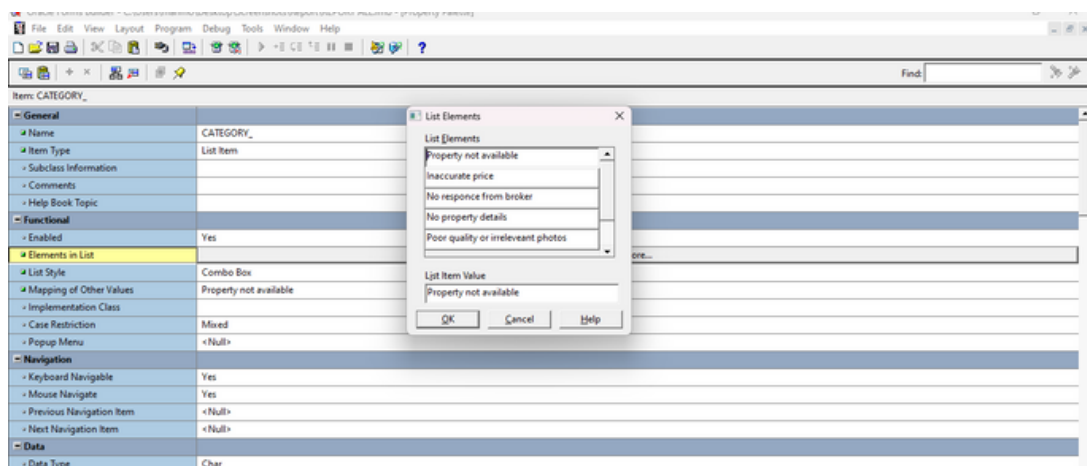
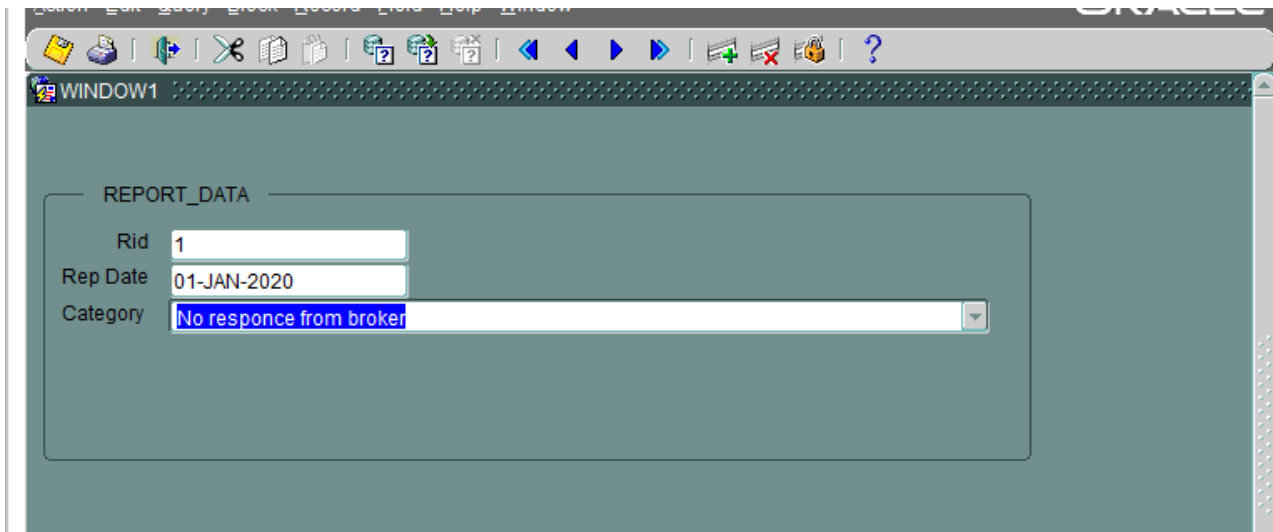
<https://drive.google.com/file/d/1ODKHsebMgCifazA532OfMGxR3jBXLST4/view?usp=sharing>

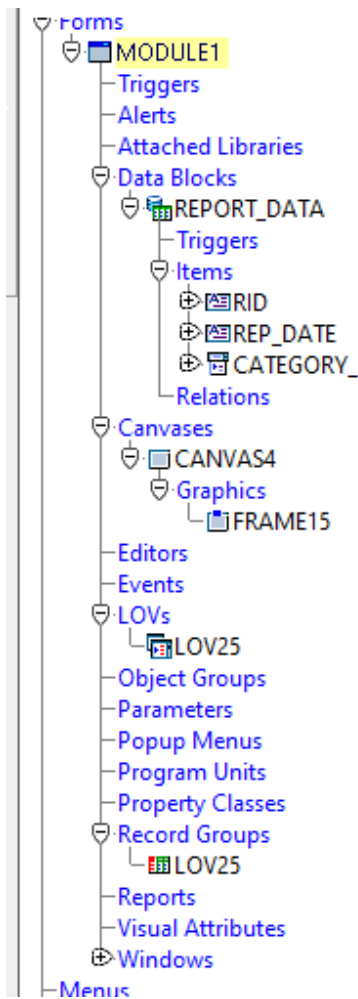
2- IMPLEMENTING REPORT CANVAS:

This canvas includes blocks related to the Report & Report Data tables.
This canvas utilizes the following:

- Combo box
- List of Values

Screenshots for Report Canvas:





The source file of canvas .fmb:

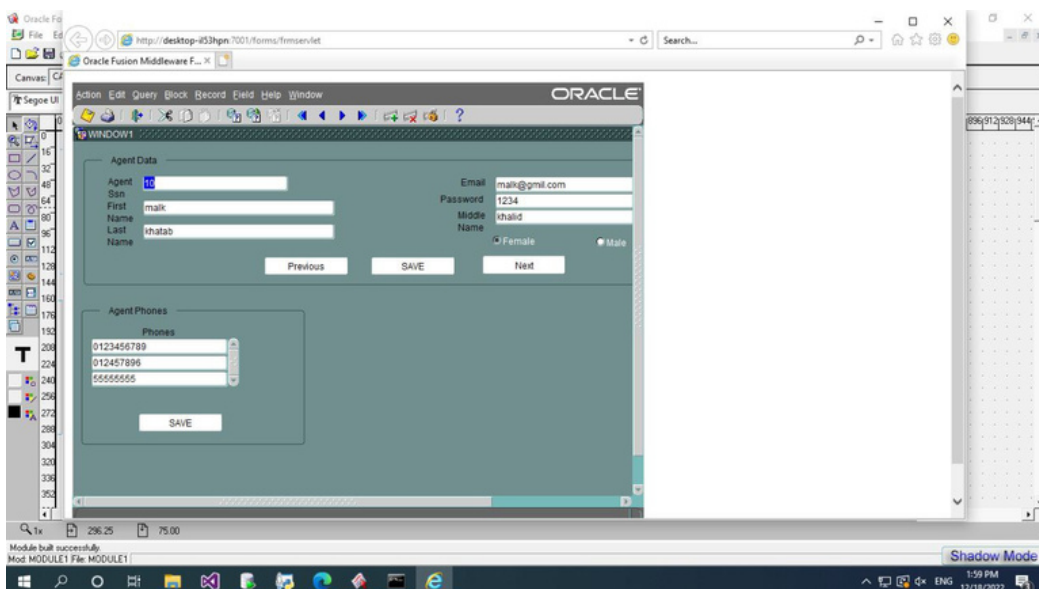
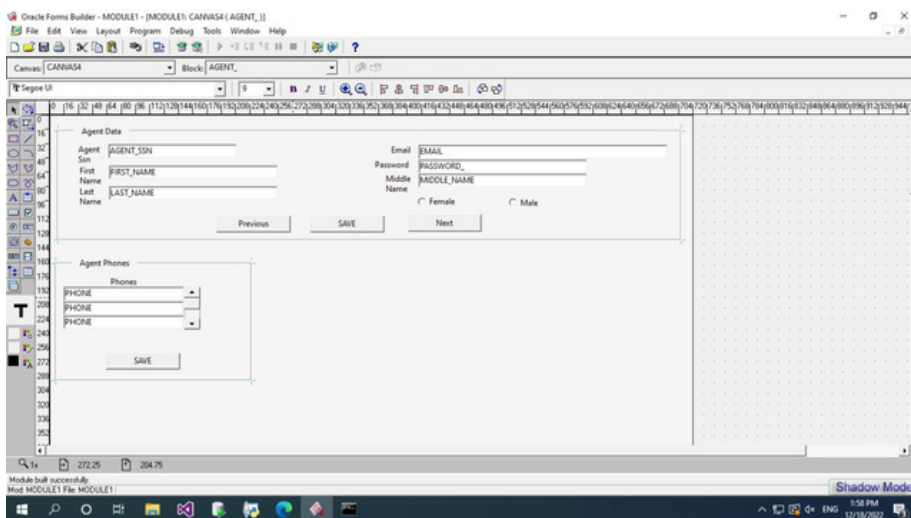
<https://drive.google.com/file/d/1IvvgYXzP5ON8bUg8tvNqbtgkg1-iUJ1q/view?usp=sharing>

2- IMPLEMENTING AGENT CANVAS:

This canvas includes blocks related to the Agent phone & Agent Data tables. This canvas utilizes the following:

- radio button
- triggers
- master detail

Screenshots for Agent Canvas:



The source file of canvas .fmb:

https://drive.google.com/file/d/1qR7631liO5ovcS_4cVec0VUvRHi43Ny_/view?usp=sharing

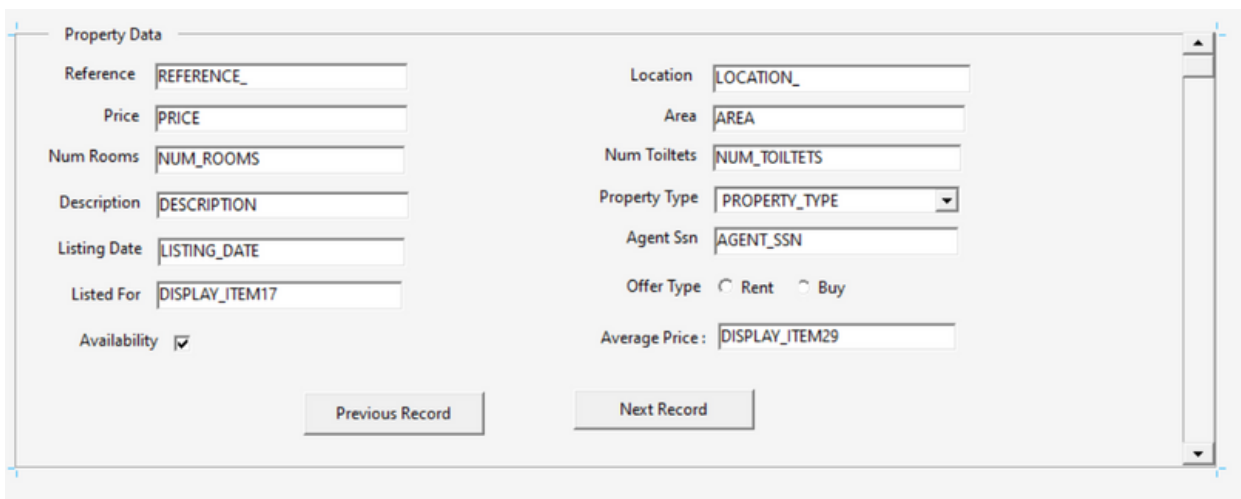
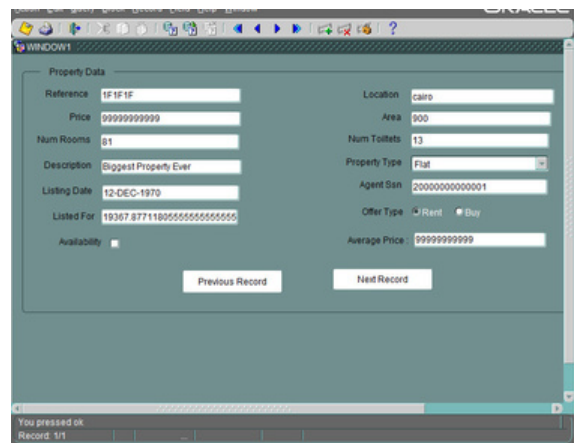
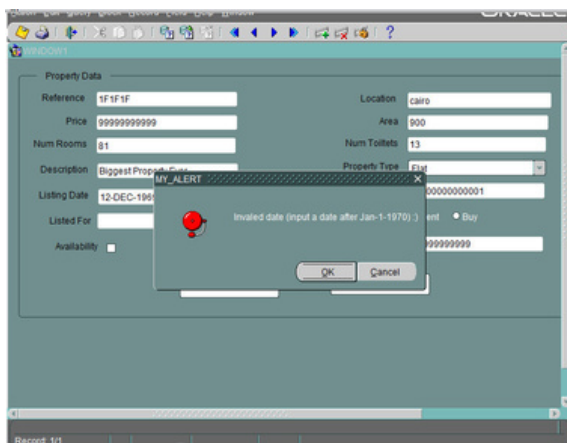
3- IMPLEMENTING PROPERTY CANVAS:

This canvas includes blocks related to the Properties tables.

This canvas utilizes the following:

- radio buttons
- push buttons
- check box
- formula
- summary
- alert
- combo box

Screenshots for Agent Canvas:



Listing data alert:

```
1 Declare
2   b number;
3 Begin
4   If :property.Listing_Date < '01-JAN-1970' then
5     b:= show_alert('My_Alert');
6     If b = 88 then
7       Message('You pressed ok');
8       Message('You pressed ok');
9       Raise form_trigger_failure;
10    Elsf b = 89 then
11      Message('You pressed ok');
12      Message('You pressed ok');
13    End if;
14  End if;
15 End;
```

```
1 Declare
2   b number;
3 Begin
4   If :property.Listing_Date < '01-JAN-1970' then
5     b:= show_alert('My_Alert');
6     If b = 88 then
7       Message('You pressed ok');
8       Message('You pressed ok');
9       Raise form_trigger_failure;
10    Elsf b = 89 then
11      Message('You pressed ok');
12      Message('You pressed ok');
13    End if;
14  End if;
15 End;
```

The screenshot shows a 'Property Data' form with various input fields. A context menu is open over the 'Listing Date' field, showing options like 'Cut', 'Copy', 'Paste', 'Property Palette', 'PL/SQL Editor', 'Data Block Wizard', 'Layout Wizard', 'Update Layout', 'Smart Triggers', 'SmartClasses', and 'Help'. The 'Smart Triggers' option is selected, and a sub-menu is displayed with the following items: 'WHEN-VALIDATE-ITEM' (highlighted with a green box), 'WHEN-NEW-ITEM-INSTANCE', 'PRE-TEXT-ITEM', 'POST-TEXT-ITEM', 'WHEN-CUSTOM-ITEM-EVENT', and 'Other'. The form fields include: Reference (REFERENCE_), Price (PRICE), Num Rooms (NUM_ROOMS), Description (DESCRIPTION), Listing Date (LISTING_DATE), Listed For (DISPLAY_ITEM), Availability (checked), Location (LOCATION_), Area (AREA), Num Toilets (NUM_TOILETS), Property Type (PROPERTY_TYPE), Agent Ssn (AGENT_SSN), Offer Type (Rent/Buy), and Average Price (DISPLAY_ITEM29). A 'Next Record' button is also visible.

This screenshot is identical to the one above, showing the 'Property Data' form with the 'Smart Triggers' menu open and the 'WHEN-VALIDATE-ITEM' option highlighted. The form fields and layout are the same as in the previous image.

Item: AVAILABLE	
General	
Name	AVAILABLE
Item Type	<u>Check Box</u>
Subclass Information	
Comments	
Help Book Topic	
Functional	
Enabled	Yes
Label	
Access Key	
Implementation Class	
Value when Checked	<u>Y</u>
Value when Unchecked	<u>N</u>
Check Box Mapping of Other Values	<u>Unchecked</u>
Popup Menu	<Null>
Navigation	
Keyboard Navigable	Yes
Mouse Navigate	Yes
Previous Navigation Item	<Null>
Next Navigation Item	<Null>
Data	
Data Type	Char
Data Length Semantics	BYTE
Maximum Length	9
Initial Value	Yes
Copy Value from Item	
Synchronize with Item	<Null>
Calculation	

Item: AVAILABLE	
General	
Name	AVAILABLE
Item Type	<u>Check Box</u>
Subclass Information	
Comments	
Help Book Topic	
Functional	
Enabled	Yes
Label	
Access Key	
Implementation Class	
Value when Checked	<u>Y</u>
Value when Unchecked	<u>N</u>
Check Box Mapping of Other Values	<u>Unchecked</u>
Popup Menu	<Null>
Navigation	
Keyboard Navigable	Yes
Mouse Navigate	Yes
Previous Navigation Item	<Null>
Next Navigation Item	<Null>
Data	
Data Type	Char
Data Length Semantics	BYTE
Maximum Length	9
Initial Value	Yes
Copy Value from Item	
Synchronize with Item	<Null>
Calculation	

Item: DISPLAY_ITEM29	
Item Type	<u>Display Item</u>
Subclass Information	
Comments	
Help Book Topic	
Functional	
Justification	Start
Popup Menu	<Null>
Navigation	
Previous Navigation Item	<Null>
Next Navigation Item	<Null>
Data	
Data Type	Number
Data Length Semantics	Null
Maximum Length	30
Initial Value	
Format Mask	
Copy Value from Item	
Synchronize with Item	<Null>
Calculation	
Calculation Mode	<u>Summary</u>
Formula	
Summary Function	<u>Avg</u>
Summarized Block	<u>PROPERTY</u>
Summarized Item	<u>PRICE</u>
Records	
Current Record Visual Attribute Group	<Null>
Distance Between Records	0
Number of Items Displayed	0



Item: PROPERTY_TYPE	
Item Type	List Item
Subclass Information	
Comments	
Help Book Topic	
Functional	
Enabled	Yes
Elements in List	
List Style	Combo Box
Mapping of Other Values	
Implementation Class	
Case Restriction	Mixed
Popup Menu	<Null>
Navigation	
Keyboard Navigable	Yes
Mouse Navigate	Yes
Previous Navigation Item	<Null>
Next Navigation Item	<Null>
Data	
Data Type	Char
Data Length Semantics	BYTE
Maximum Length	20
Initial Value	Other
Required	Yes
Copy Value from Item	
Synchronize with Item	<Null>
Calculation	
Calculation Mode	None
Formula	

List Elements

List Elements

- Villa
- Flat
- Duplex
- Bedroom
- Residential Building

List Item Value

Villa

OK Cancel Help

Item: DISPLAY_ITEM17	
General	
Name	DISPLAY_ITEM17
Item Type	Display Item
Subclass Information	
Comments	
Help Book Topic	
Functional	
Justification	Start
Popup Menu	<Null>
Navigation	
Previous Navigation Item	<Null>
Next Navigation Item	<Null>
Data	
Data Type	Integer
Data Length Semantics	Null
Maximum Length	30
Initial Value	
Format Mask	
Copy Value from Item	
Synchronize with Item	<Null>
Calculation	
Calculation Mode	Formula
Formula	<u>SYSDATE - LISTING_DATE</u>
Summary Function	None
Summarized Block	<Null>
Summarized Item	<Null>
Records	
Current Record Visual Attribute Group	<Null>

Item: DISPLAY_ITEM17	
General	
Name	DISPLAY_ITEM17
Item Type	Display Item
Subclass Information	
Comments	
Help Book Topic	
Functional	
Justification	Start
Popup Menu	<Null>
Navigation	
Previous Navigation Item	<Null>
Next Navigation Item	<Null>
Data	
Data Type	Integer
Data Length Semantics	Null
Maximum Length	30
Initial Value	
Format Mask	
Copy Value from Item	
Synchronize with Item	<Null>
Calculation	
Calculation Mode	Formula
Formula	<u>SYSDATE - LISTING_DATE</u>
Summary Function	None
Summarized Block	<Null>
Summarized Item	<Null>
Records	
Current Record Visual Attribute Group	<Null>

Item: DISPLAY_ITEM17	
General	
✓ Name	DISPLAY_ITEM17
✓ Item Type	Display Item
✓ Subclass Information	
✓ Comments	
✓ Help Book Topic	
Functional	
✓ Justification	Start
✓ Popup Menu	<Null>
Navigation	
✓ Previous Navigation Item	<Null>
✓ Next Navigation Item	<Null>
Data	
✓ Data Type	Integer
✓ Data Length Semantics	Null
✓ Maximum Length	30
✓ Initial Value	
✓ Format Mask	
✓ Copy Value from Item	
✓ Synchronize with Item	<Null>
Calculation	
✓ Calculation Mode	Formula
✓ Formula	SYSDATE - :LISTING_DATE
✓ Summary Function	None
✓ Summarized Block	<Null>
✓ Summarized Item	<Null>
Records	
✓ Current Record Visual Attribute Group	<Null>

The source file of canvas .fmb:

https://drive.google.com/file/d/1xweaOWfHwk48G85PD5c2wELR5q_uPzwN/view?usp=sharing

SUMMARY :

In our project, we utilize all the requirements in the canvases above.

Link of All canvas together:

<https://drive.google.com/drive/folders/1mmRXL61HuiyOcFQ7Thhg06itLvLfo-LE?usp=sharing>

You can navigate our project through our website here:

<https://dinasolintah.github.io/Property-Finder---DBMS-PROJECT/>