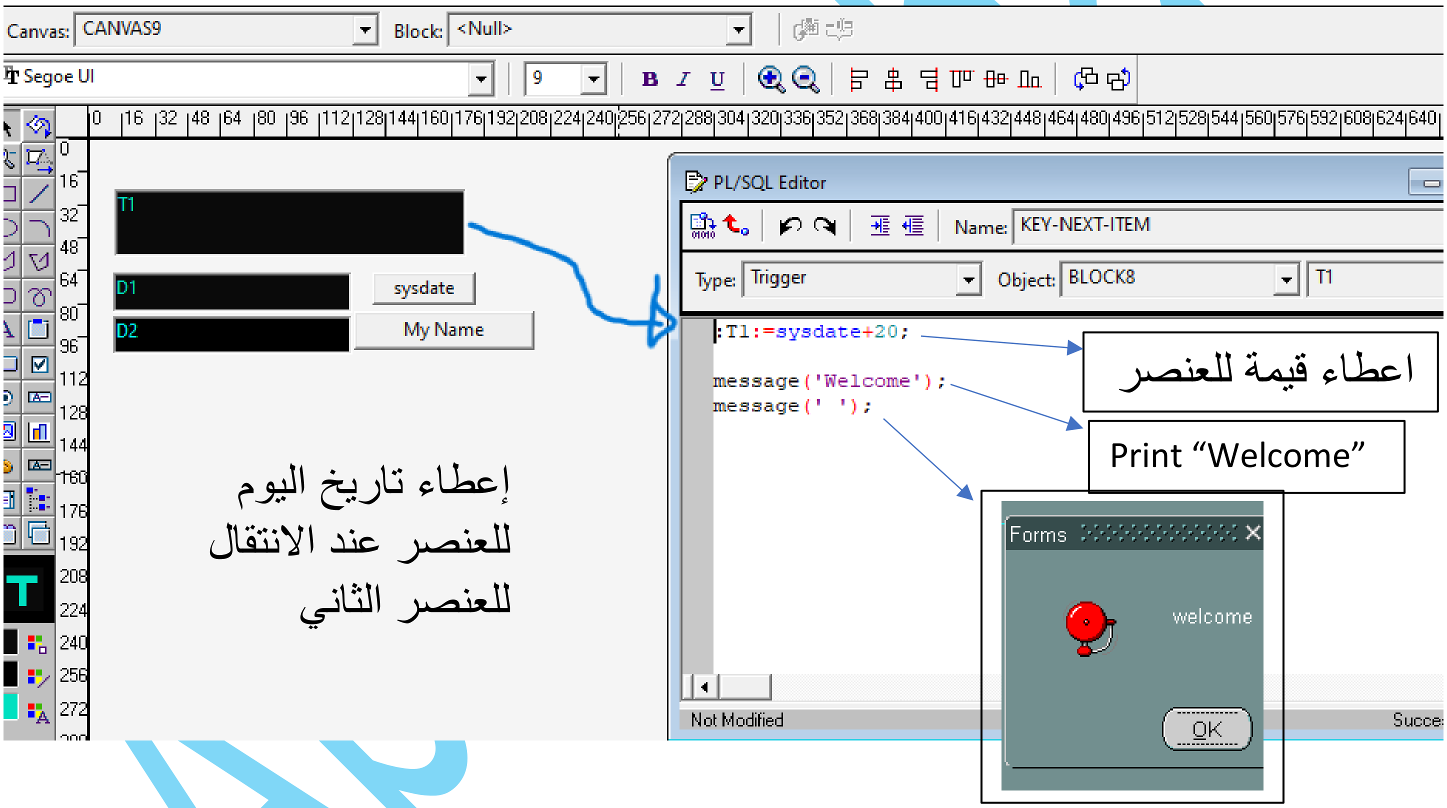
Form builder

- Trigger (key next item)

تستخدم (:) قبل العنصر إذا ارنا التعامل مع قيمته

تستخدم (=:) من اجل إعطاء قيم للعناصر او المتغيرات

تستخدم (=) من اجل المقارنة



Canvas: CANVAS9 Block: <Null>

Type: Trigger Object: BLOCK8 T1

Name: KEY-NEXT-ITEM

```
:T1:=sysdate+20;

message('Welcome');
message(' ');
```

اعطاء قيمة للعنصر

Print “Welcome”

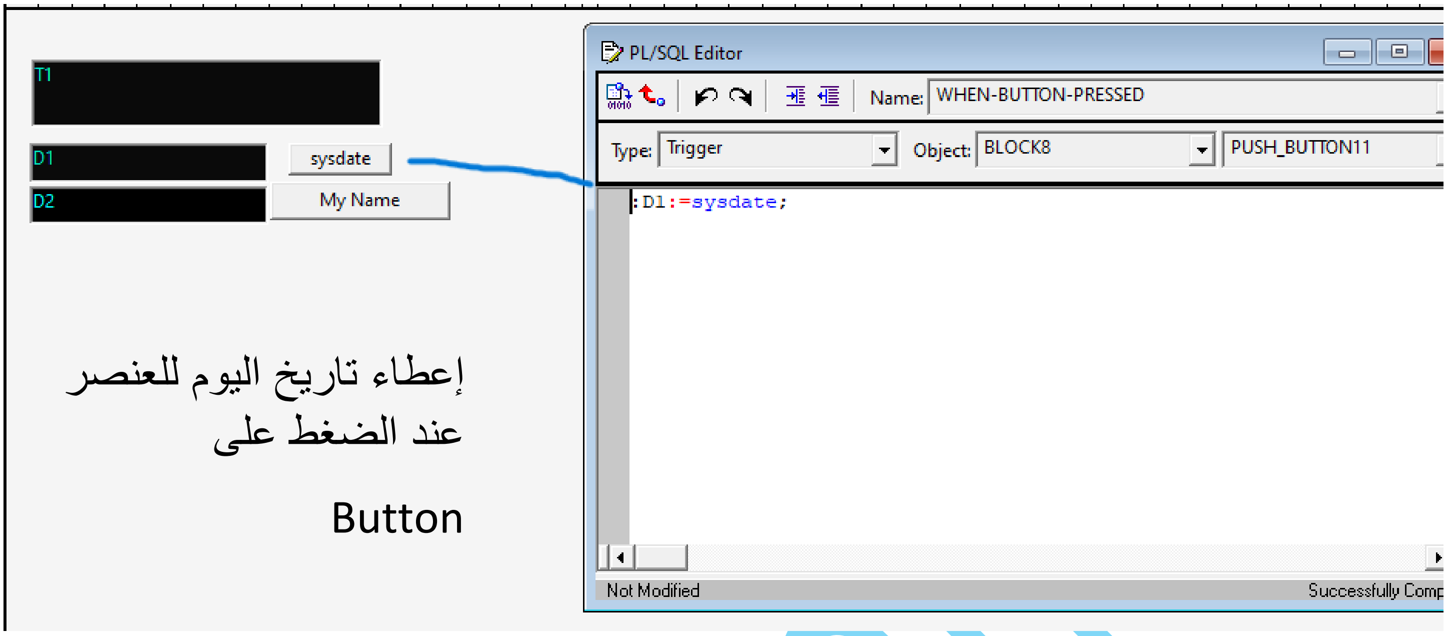
إعطاء تاريخ اليوم
للعنصر عند الانتقال
للعنصر الثاني

Node:

D -> Display-item

T -> Text-item

Trigger (when button pressed)



Name: WHEN-BUTTON-PRESSED

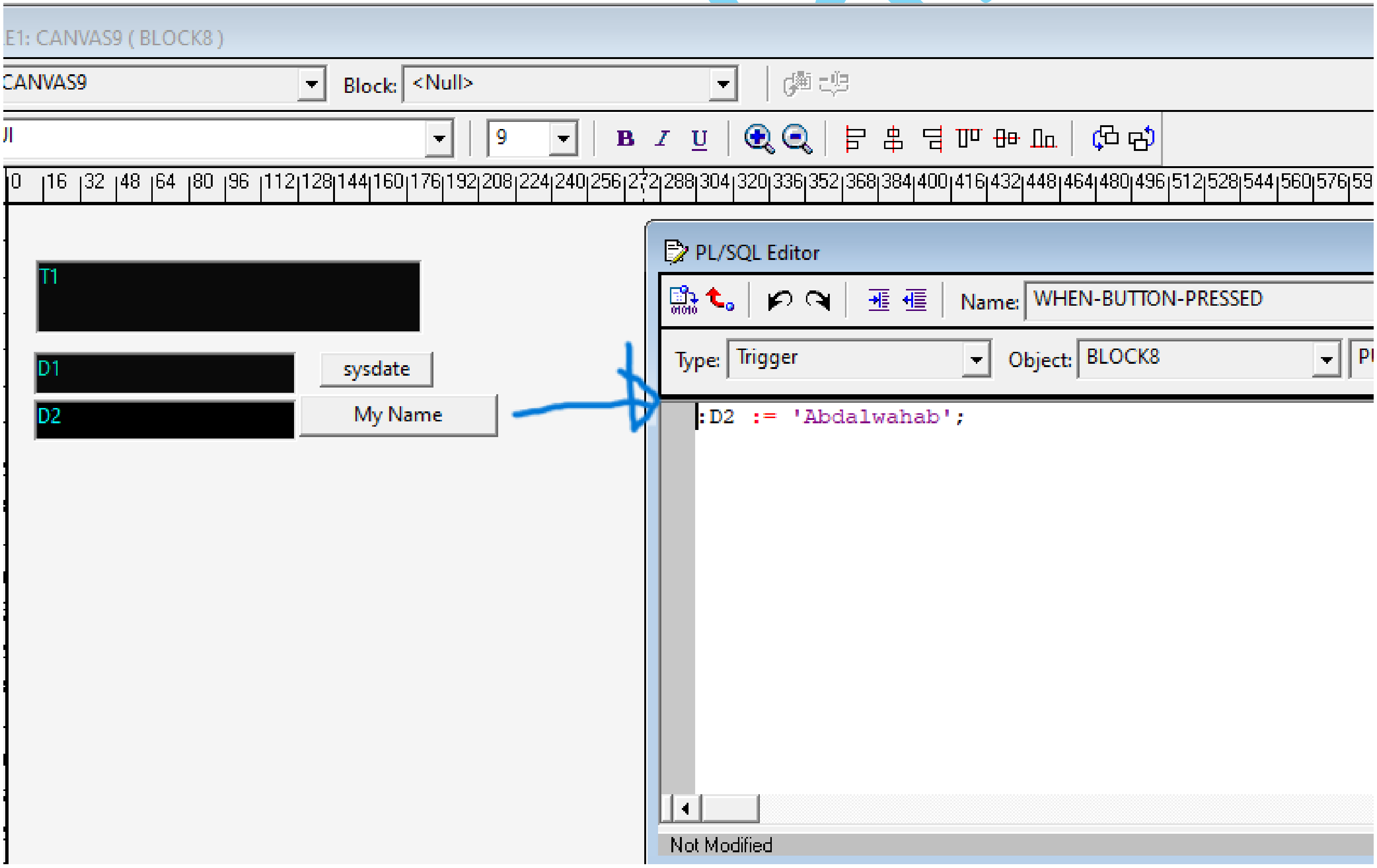
Type: Trigger Object: BLOCK8 PUSH_BUTTON11

```
:D1:=sysdate;
```

Not Modified Successfully Comp

إعطاء تاريخ اليوم للعنصر عند الضغط على

Button

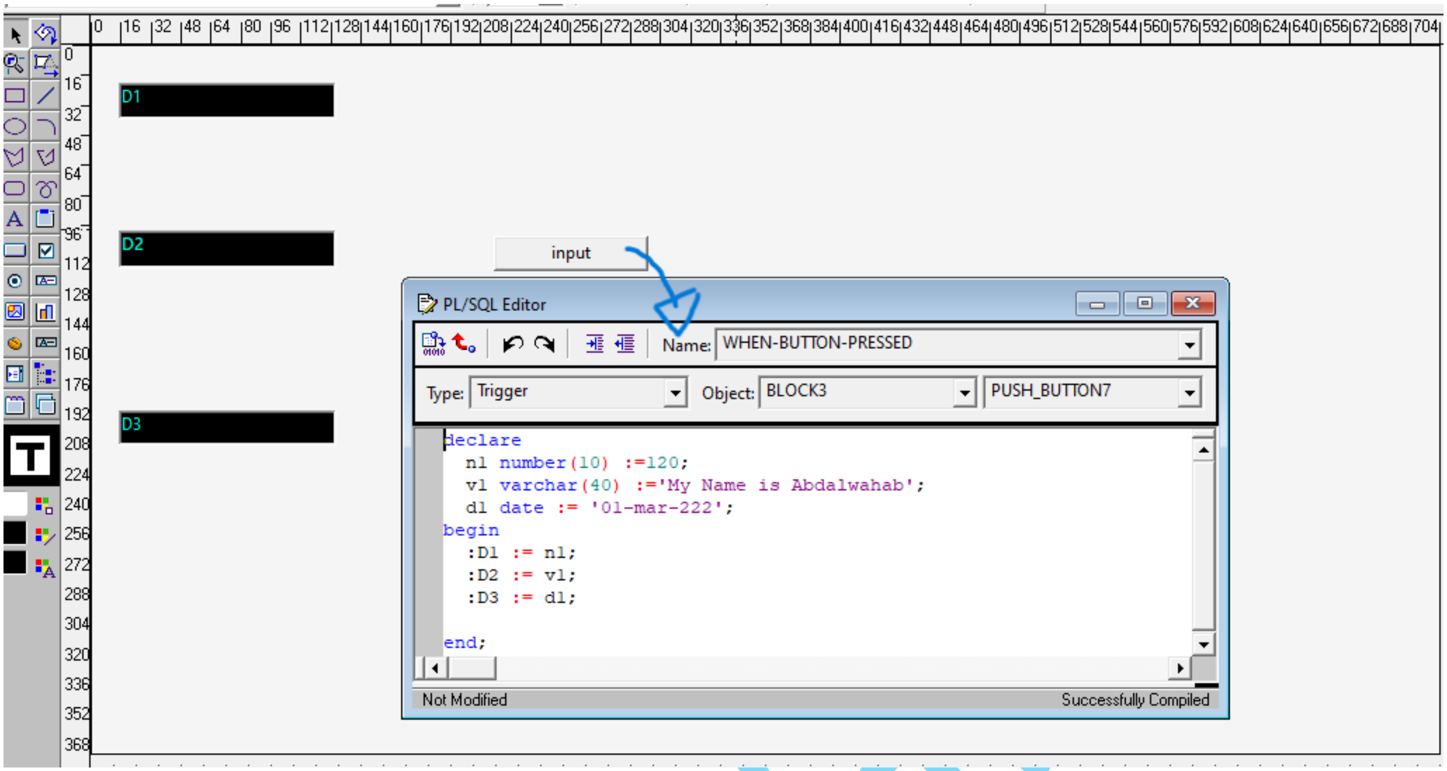


Name: WHEN-BUTTON-PRESSED

Type: Trigger Object: BLOCK8

```
:D2 := 'Abdalwahab';
```

Not Modified



Name: WHEN-BUTTON-PRESSED

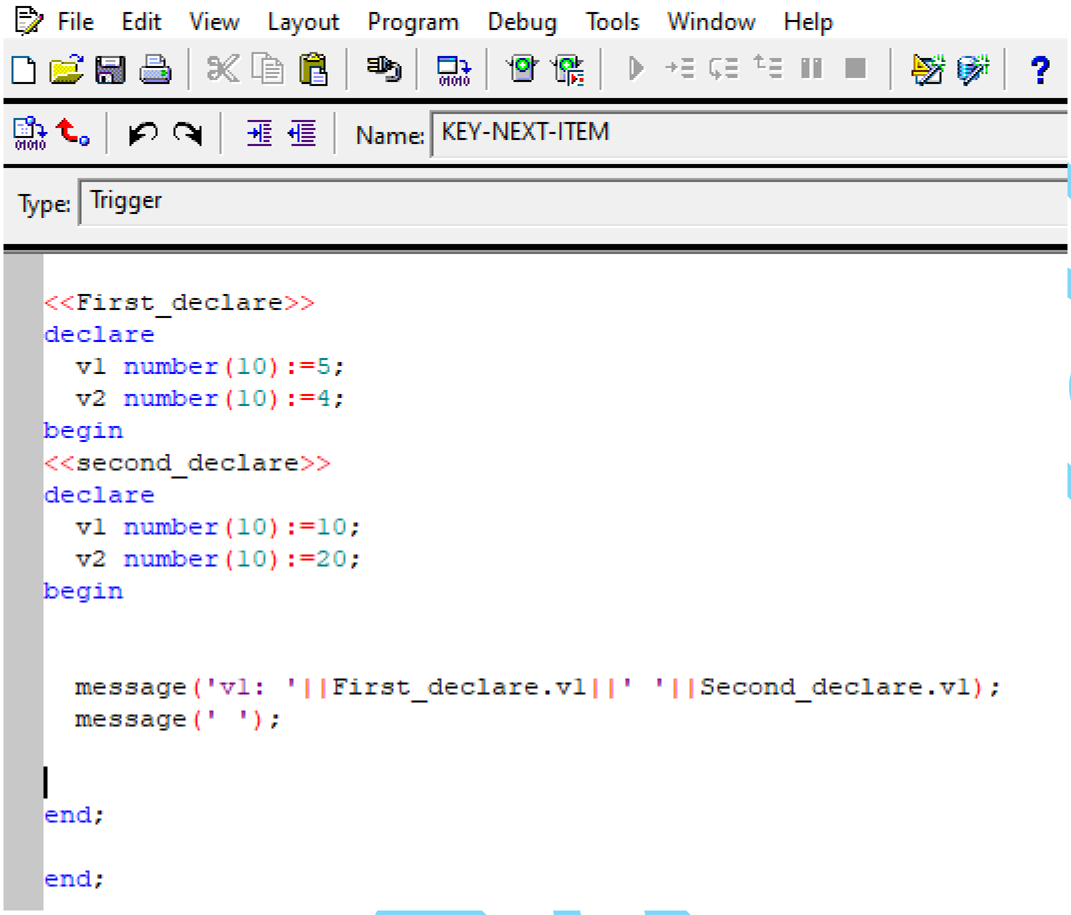
Type: Trigger Object: BLOCK3 PUSH_BUTTON7

```
declare
  n1 number(10) :=120;
  v1 varchar(40) :='My Name is Abdalwahab';
  d1 date := '01-mar-222';
begin
  :D1 := n1;
  :D2 := v1;
  :D3 := d1;

end;
```

Not Modified Successfully Compiled

- Declare: used to define variables

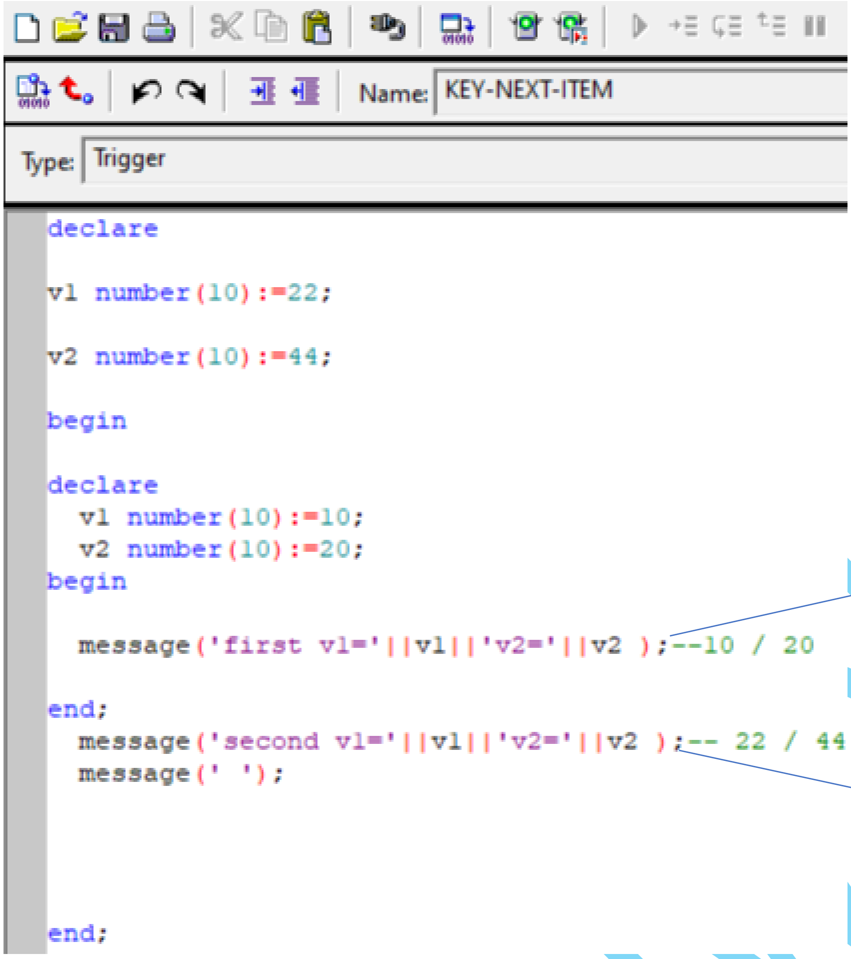
Ex: Nested block



Name: KEY-NEXT-ITEM

Type: Trigger

```
<<First_declare>>
declare
  v1 number(10):=5;
  v2 number(10):=4;
begin
<<second_declare>>
declare
  v1 number(10):=10;
  v2 number(10):=20;
begin


  message('v1: '||First_declare.v1||' '||Second_declare.v1);
  message(' ');


end;

end;
```

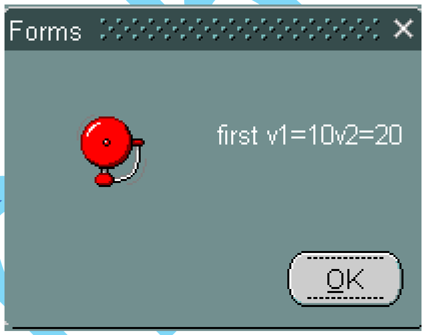


Name: KEY-NEXT-ITEM

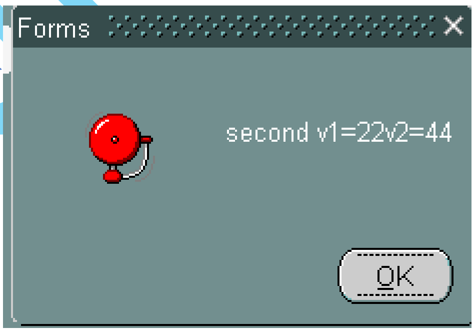
Type: Trigger

```
declare

v1 number(10):=22;

v2 number(10):=44;

begin

declare
  v1 number(10):=10;
  v2 number(10):=20;
begin

  message('first v1='||v1||'v2='||v2 );--10 / 20

end;
  message('second v1='||v1||'v2='||v2 );-- 22 / 44
  message(' ');



end;
```

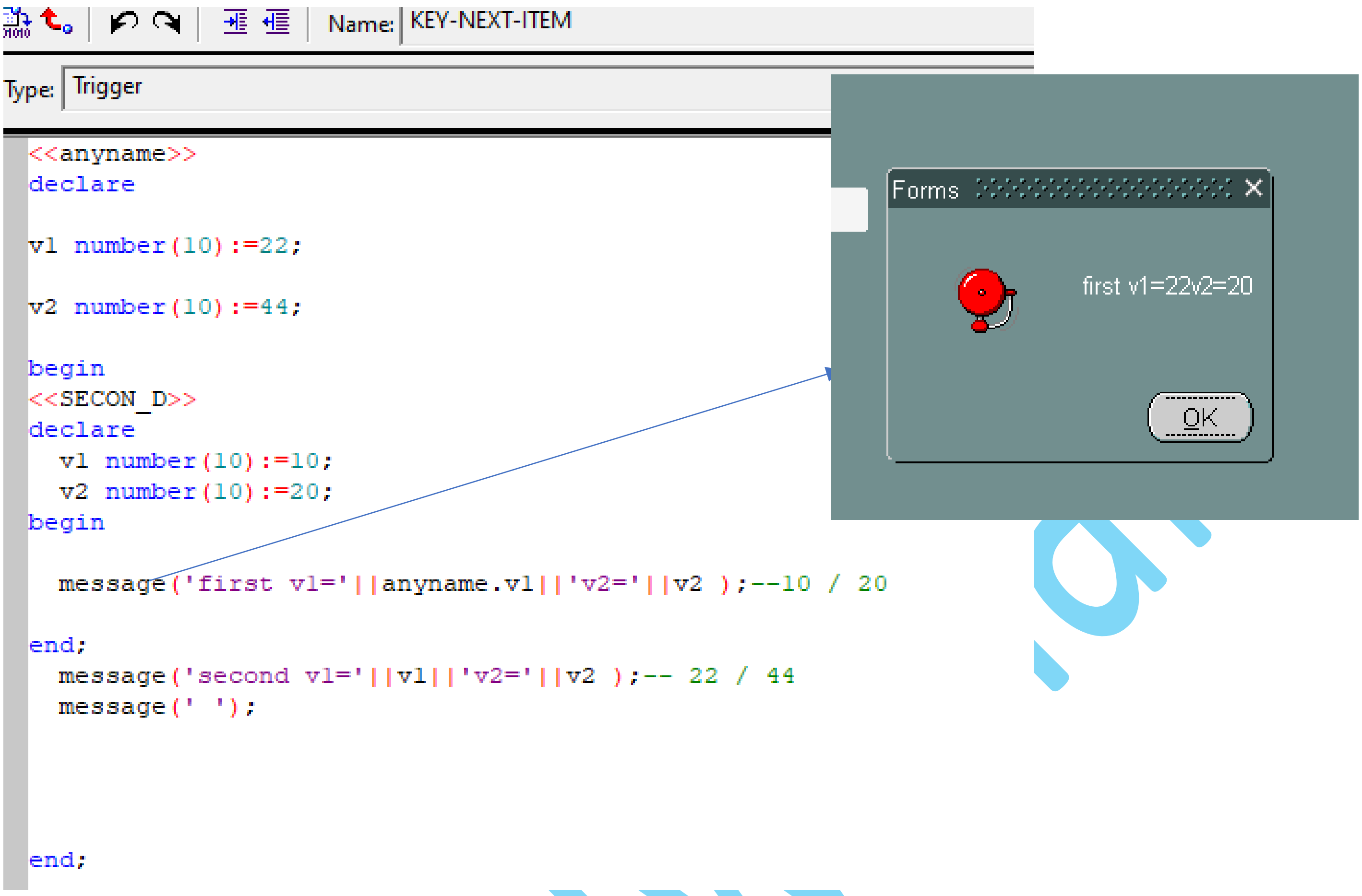
Message:



first v1=10v2=20



second v1=22v2=44



Name: KEY-NEXT-ITEM

Type: Trigger

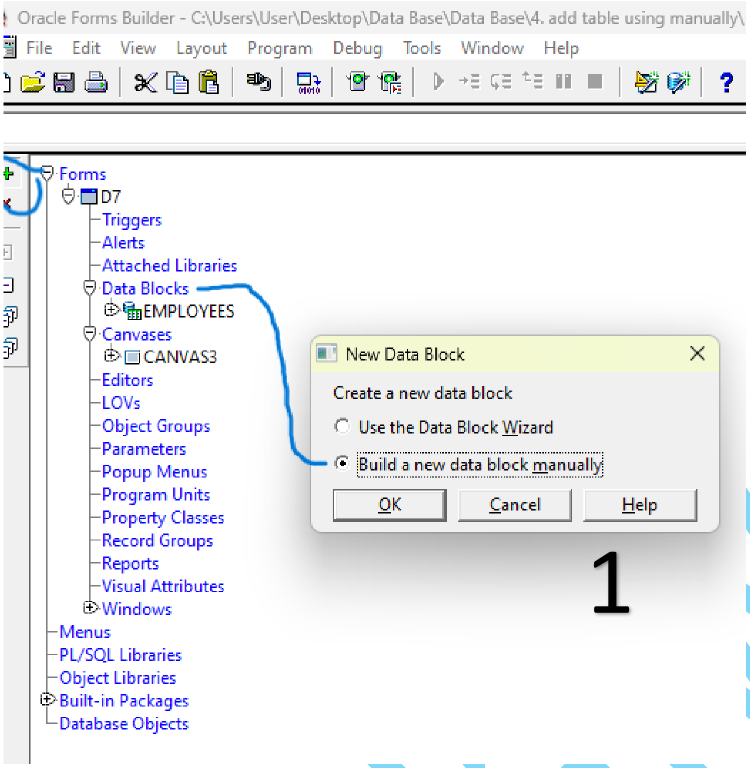
```
<<anyname>>
declare

v1 number(10):=22;

v2 number(10):=44;

begin
<<SECON_D>>
declare
  v1 number(10):=10;
  v2 number(10):=20;
begin

  message('first v1='||anyname.v1||'v2='||v2 );--10 / 20

end;
  message('second v1='||v1||'v2='||v2 );-- 22 / 44
  message(' ');




end;
```

Forms

first v1=22v2=20

- Create new data block (build new data block manually)
- Connect items and blocks to databases.

1. Connect the BLOCK with the TABLE



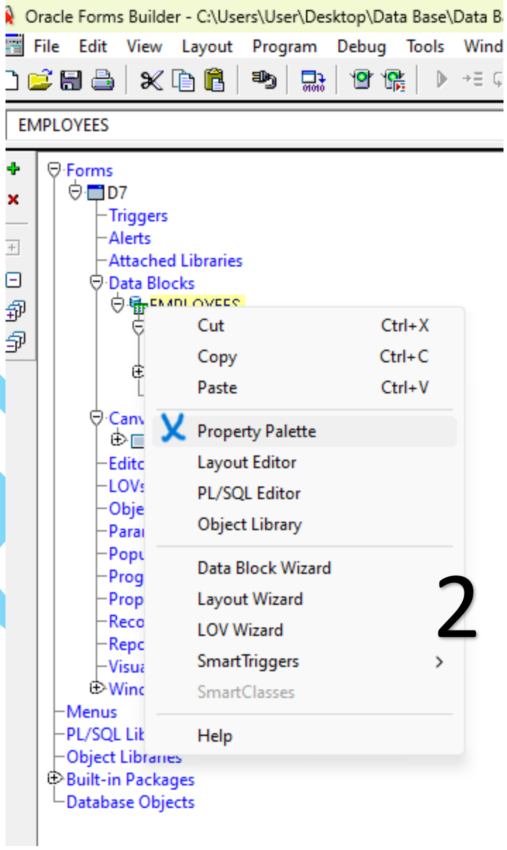
New Data Block

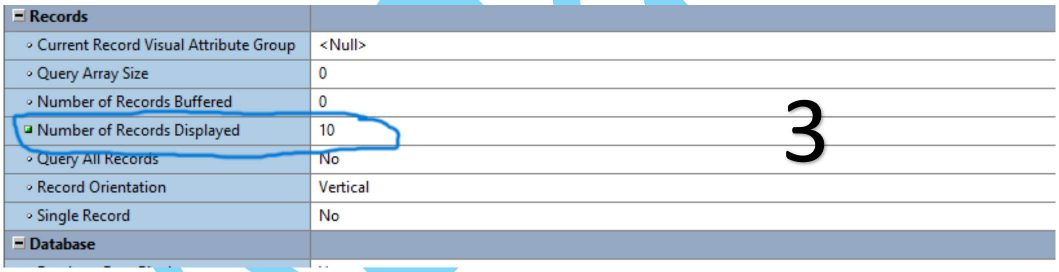
Create a new data block

○ Use the Data Block Wizard

● Build a new data block manually

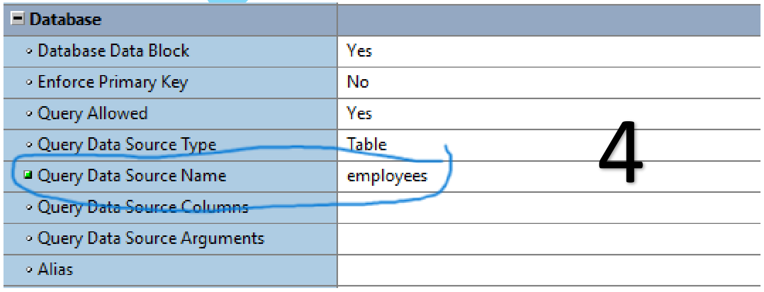
OK Cancel Help





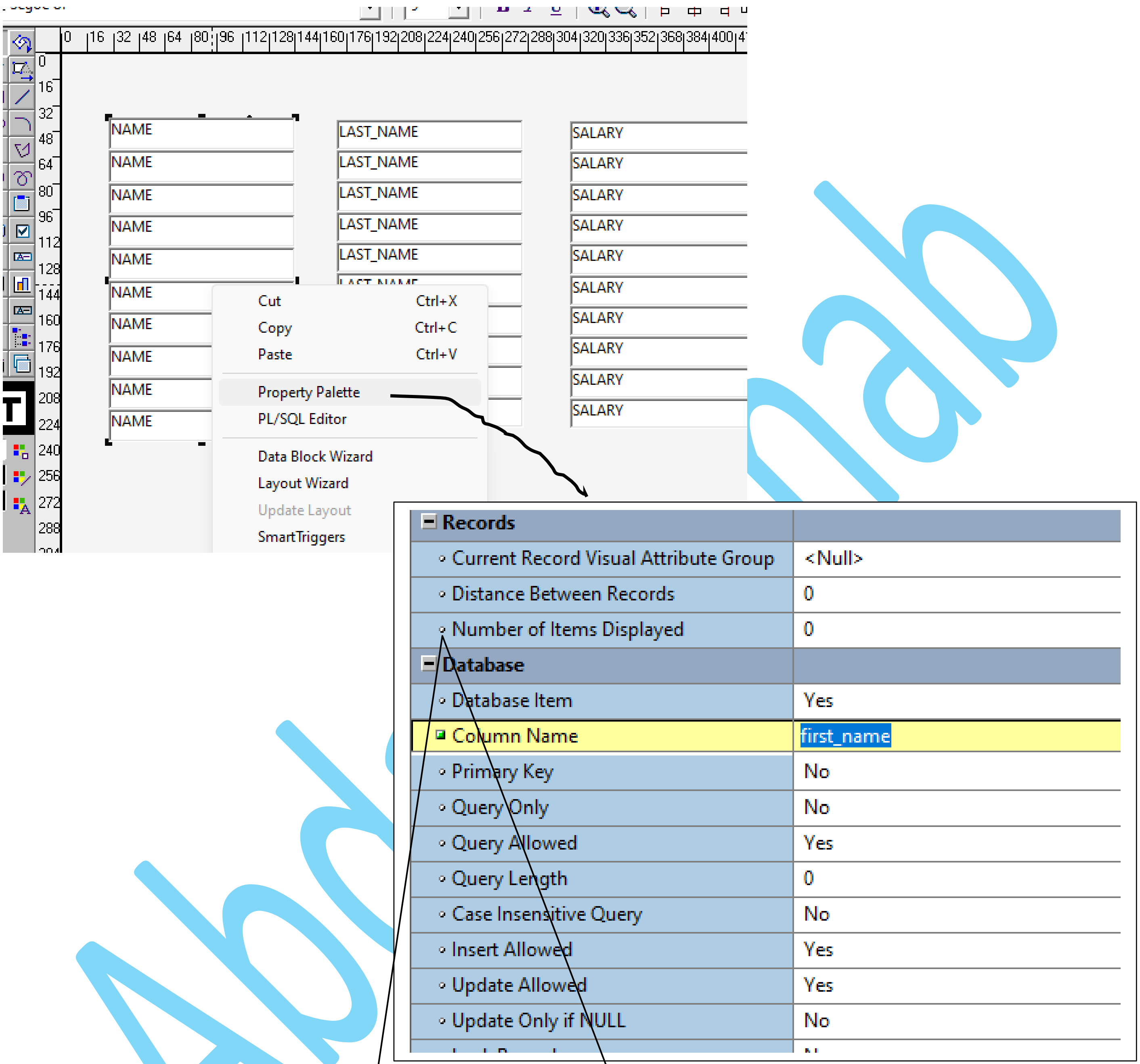
Records	
Current Record Visual Attribute Group	<Null>
Query Array Size	0
Number of Records Buffered	0
Number of Records Displayed	10
Query All Records	No
Record Orientation	Vertical
Single Record	No
Database	

- Table selection



Database	
Database Data Block	Yes
Enforce Primary Key	No
Query Allowed	Yes
Query Data Source Type	Table
Query Data Source Name	employees
Query Data Source Columns	
Query Data Source Arguments	
Alias	

2. Connect the ITEM with the COLUMN



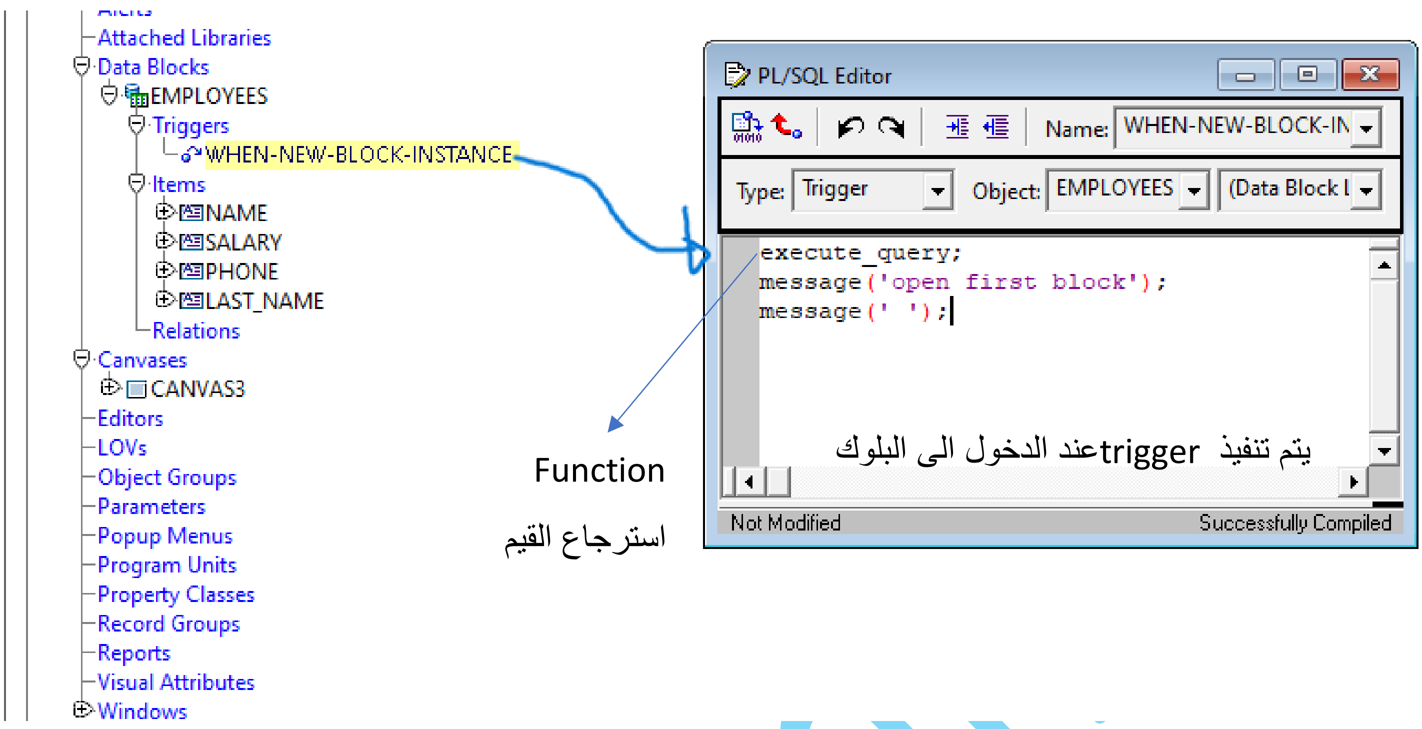
Records	
Current Record Visual Attribute Group	<Null>
Distance Between Records	0
Number of Items Displayed	0
Database	
Database Item	Yes
Column Name	first_name
Primary Key	No
Query Only	No
Query Allowed	Yes
Query Length	0
Case Insensitive Query	No
Insert Allowed	Yes
Update Allowed	Yes
Update Only if NULL	No

ملاحظة: هذا عدد قيم العنصر

ويظهر في المثال ان كل عنصر له 10 قيم السبب ان في البداية يأخذ القيمة من البلوك:

*Number of Records Display:10

ويمكن التعديل من هنا بشرط ان لا تتجاوز القيمة المختارة في البلوك



Name: WHEN-NEW-BLOCK-IN

Type: Trigger   Object: EMPLOYEES   (Data Block l

```
execute_query;
message('open first block');
message(' ');
```

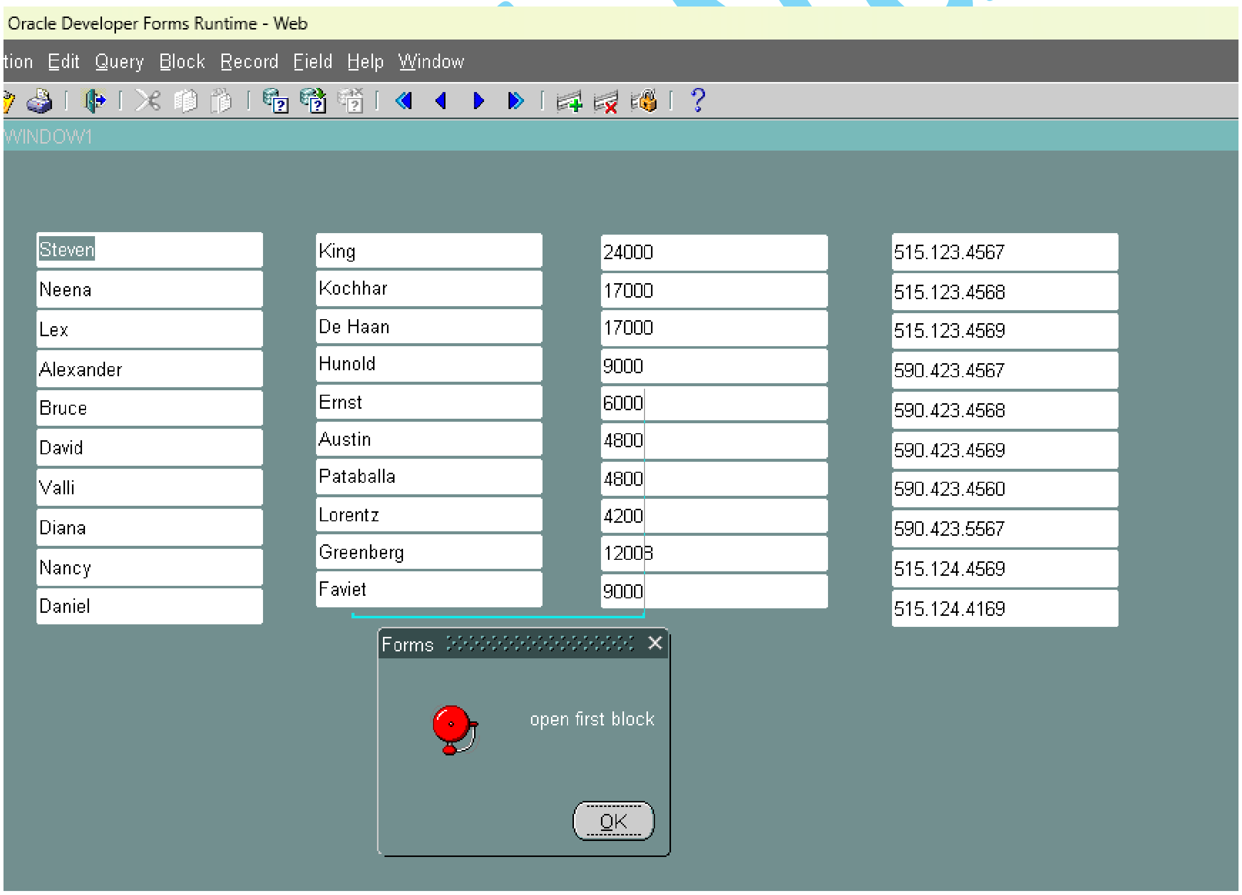
يتم تنفيذ الtriggerعند الدخول الى البلوك

Not Modified   Successfully Compiled

Function

استرجاع القيم

- Run

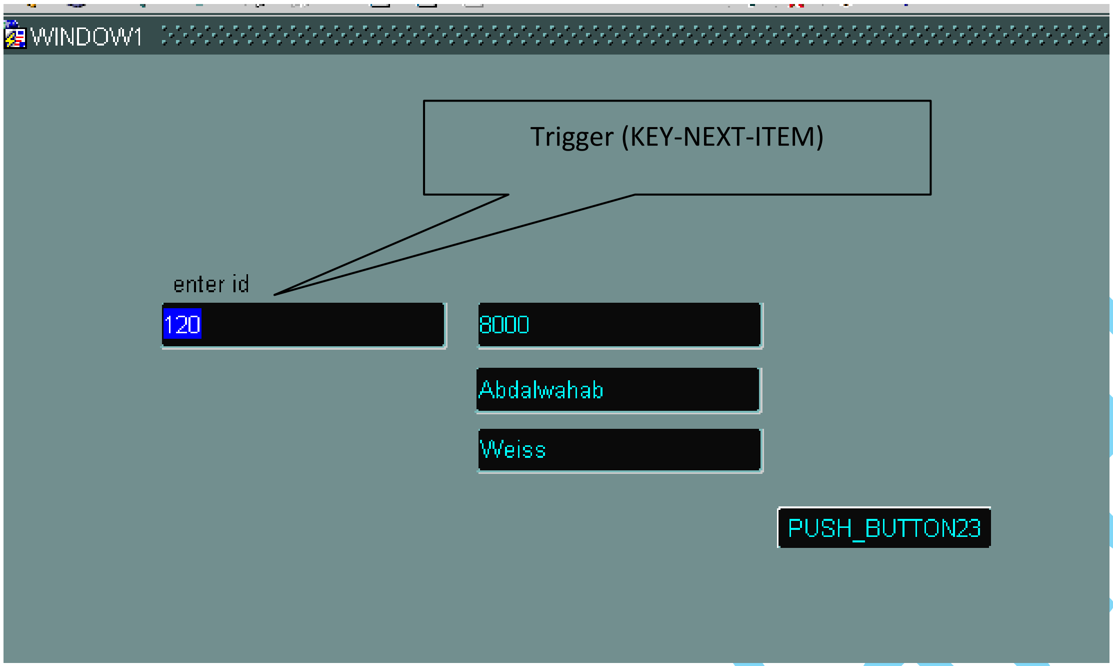

Oracle Developer Forms Runtime - Web
tion Edit Query Block Record Field Help Window
WINDOW1

Steven	King	24000	515.123.4567
Neena	Kochhar	17000	515.123.4568
Lex	De Haan	17000	515.123.4569
Alexander	Hunold	9000	590.423.4567
Bruce	Ernst	6000	590.423.4568
David	Austin	4800	590.423.4569
Valli	Pataballa	4800	590.423.4560
Diana	Lorentz	4200	590.423.5567
Nancy	Greenberg	12008	515.124.4569
Daniel	Faviet	9000	515.124.4169

Forms

open first block

Ex: ***Display the salary and the first name through the employee_id***



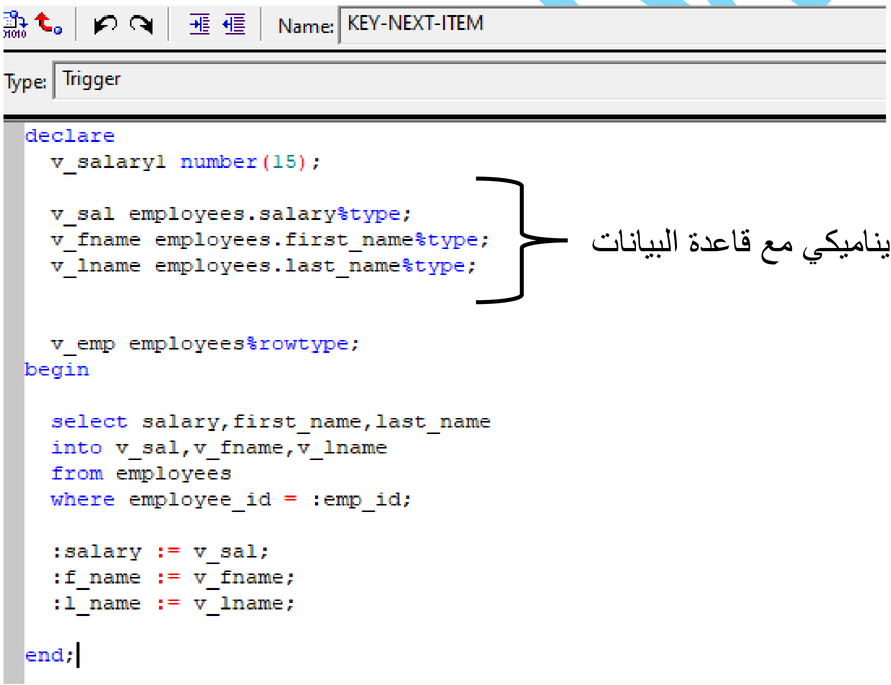
120

8000

Abdalwahab

Weiss

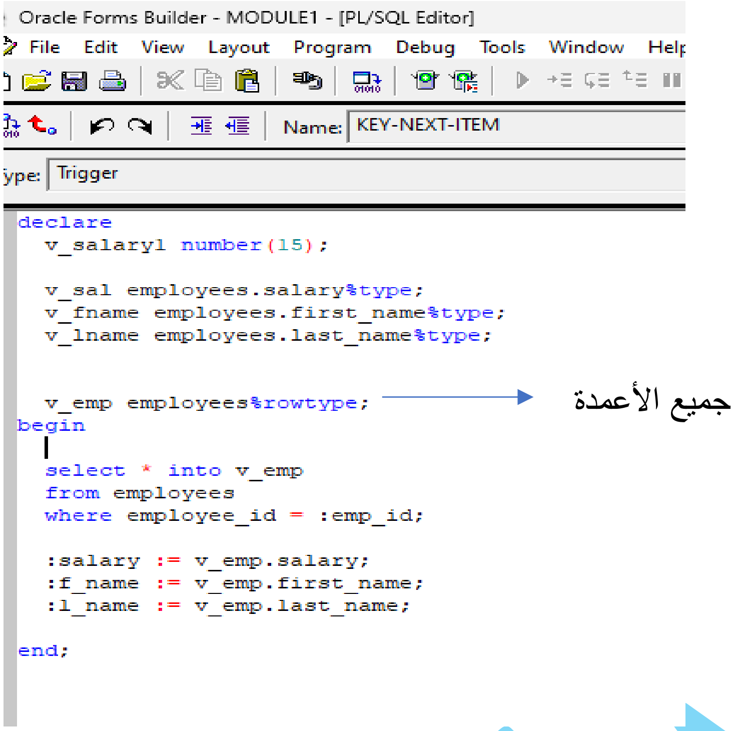
1. First way:



```
declare
  v_salary1 number(15);

  v_sal employees.salary%type;
  v_fname employees.first_name%type;
  v_lname employees.last_name%type;


  v_emp employees%rowtype;
begin

  select salary,first_name,last_name
  into v_sal,v_fname,v_lname
  from employees
  where employee_id = :emp_id;

  :salary := v_sal;
  :f_name := v_fname;
  :l_name := v_lname;

end;
```

تعريف متغيرات بشكل ديناميكي مع قاعدة البيانات

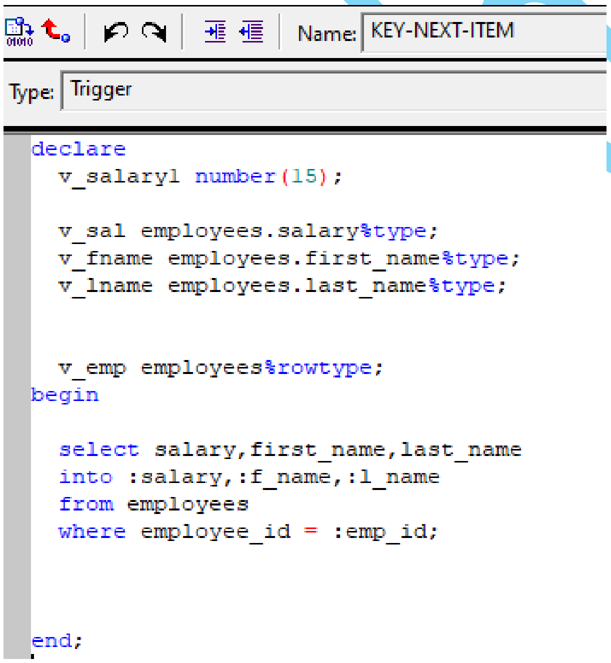
2.Second way:


Oracle Forms Builder - MODULE1 - [PL/SQL Editor]
File Edit View Layout Program Debug Tools Window Help
Name: KEY-NEXT-ITEM
ype: Trigger

```
declare
  v_salary1 number(15);

  v_sal employees.salary%type;
  v_fname employees.first_name%type;
  v_lname employees.last_name%type;


  v_emp employees%rowtype;
begin

  select * into v_emp
  from employees
  where employee_id = :emp_id;

  :salary  := v_emp.salary;
  :f_name  := v_emp.first_name;
  :l_name  := v_emp.last_name;

end;
```

تعريف متغير يأخذ جميع الأعمدة

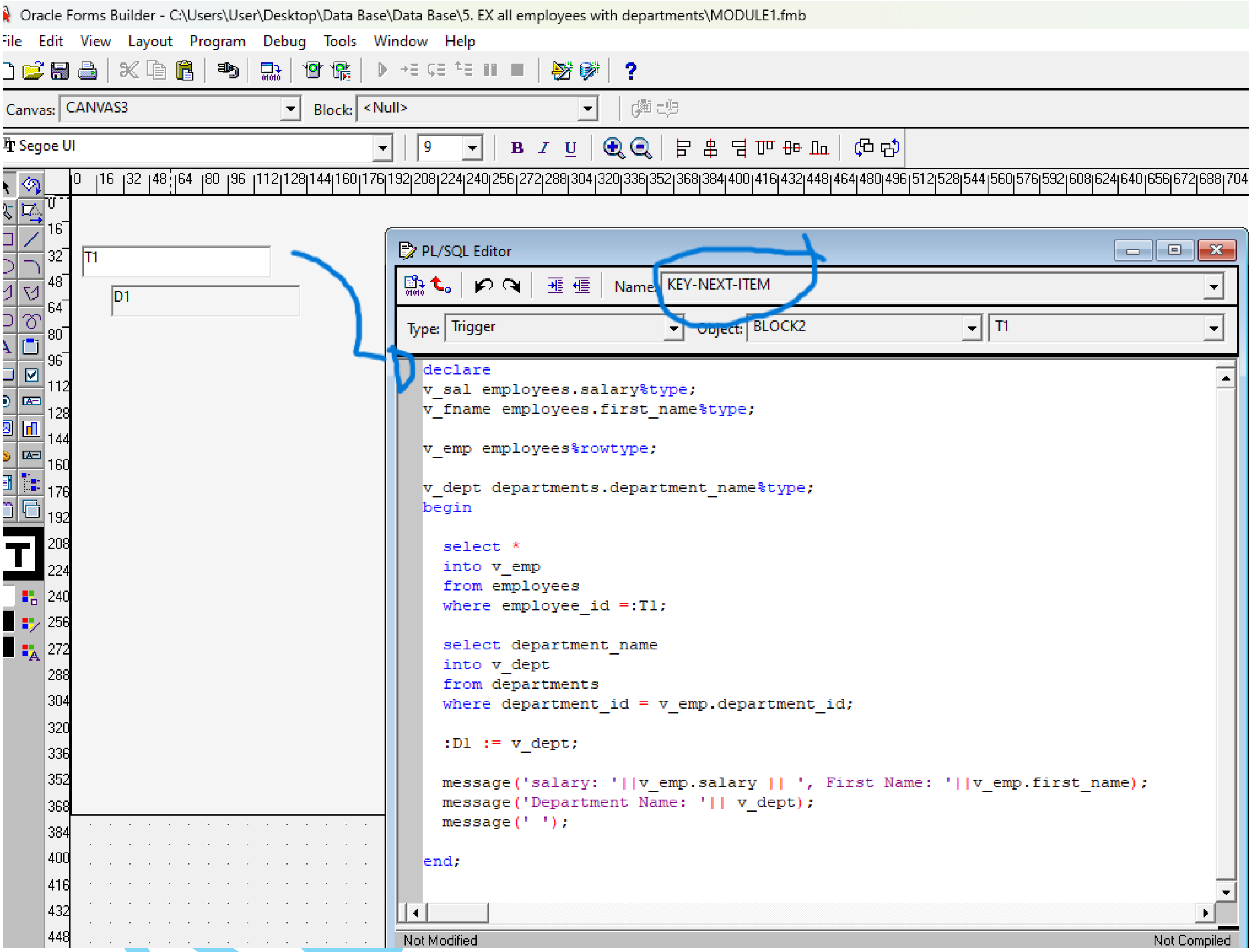
3. The third way



```
declare
  v_salary1 number(15);

  v_sal employees.salary%type;
  v_fname employees.first_name%type;
  v_lname employees.last_name%type;


  v_emp employees%rowtype;
begin

  select salary,first_name,last_name
  into :salary,:f_name,:l_name
  from employees
  where employee_id = :emp_id;



end;
```

إعطاء قيم بشكل مباشر للعناصر

Ex:



Oracle Forms Builder - C:\Users\User\Desktop\Data Base\Data Base\5. EX all employees with departments\MODULE1.fmb

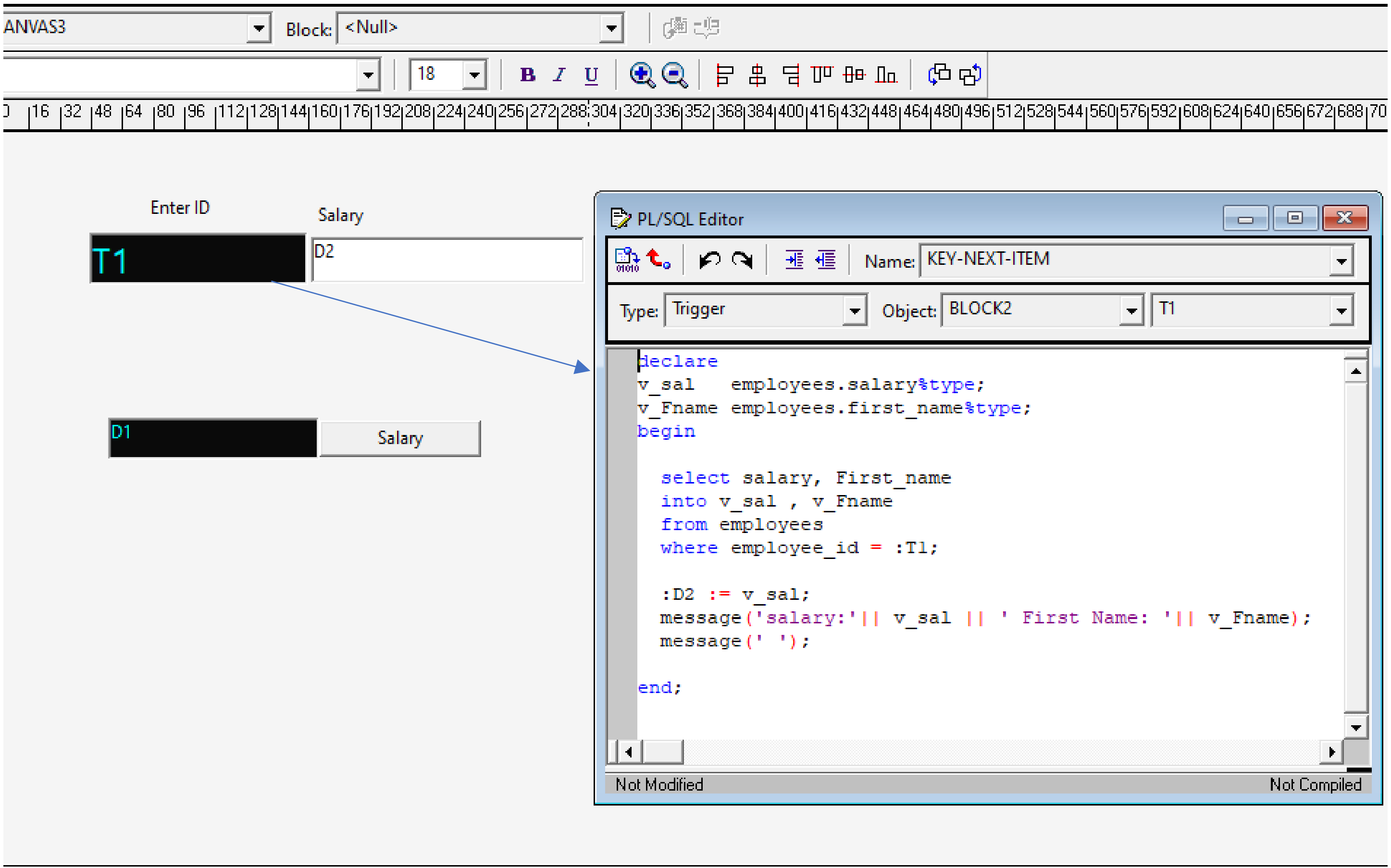
Canvas: CANVAS3 Block: <Null>

Name: KEY-NEXT-ITEM

Type: Trigger Object: BLOCK2 T1

```
declare
v_sal employees.salary%type;
v_fname employees.first_name%type;

v_emp employees%rowtype;

v_dept departments.department_name%type;
begin

  select *
  into v_emp
  from employees
  where employee_id =:T1;

  select department_name
  into v_dept
  from departments
  where department_id = v_emp.department_id;

  :D1 := v_dept;

  message('salary: '||v_emp.salary || ', First Name: '||v_emp.first_name);
  message('Department Name: '|| v_dept);
  message(' ');

end;
```

Ex:

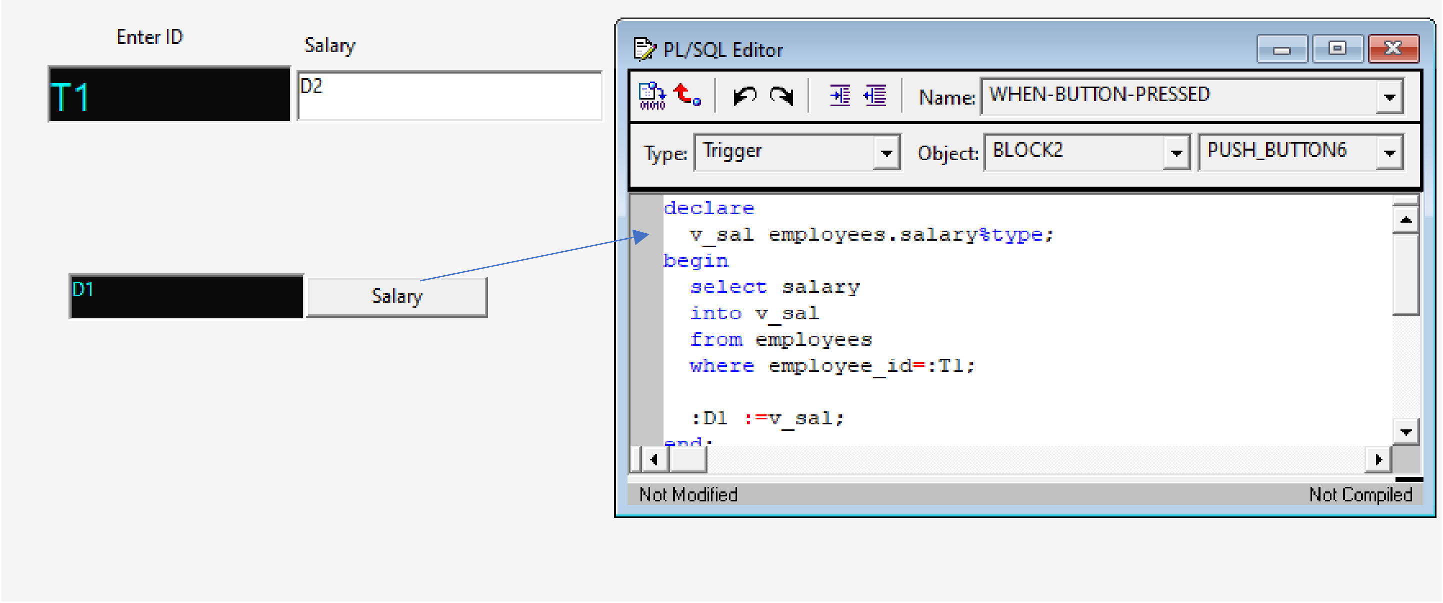


Name: KEY-NEXT-ITEM

Type: Trigger   Object: BLOCK2   T1

```
declare
v_sal    employees.salary%type;
v_Fname employees.first_name%type;
begin

  select salary, First_name
  into v_sal , v_Fname
  from employees
  where employee_id = :T1;

  :D2 := v_sal;
  message('salary:'|| v_sal || ' First Name: '|| v_Fname);
  message(' ');

end;
```

Not Modified   Not Compiled



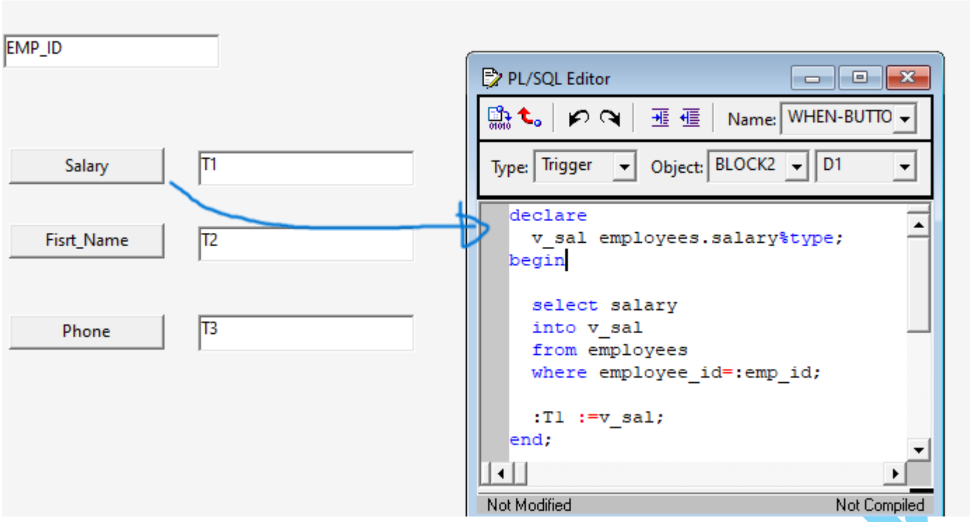
Name: WHEN-BUTTON-PRESSED

Type: Trigger   Object: BLOCK2   PUSH_BUTTON6

```
declare
  v_sal employees.salary%type;
begin
  select salary
  into v_sal
  from employees
  where employee_id=:T1;

  :D1 :=v_sal;
end;
```

Not Modified   Not Compiled

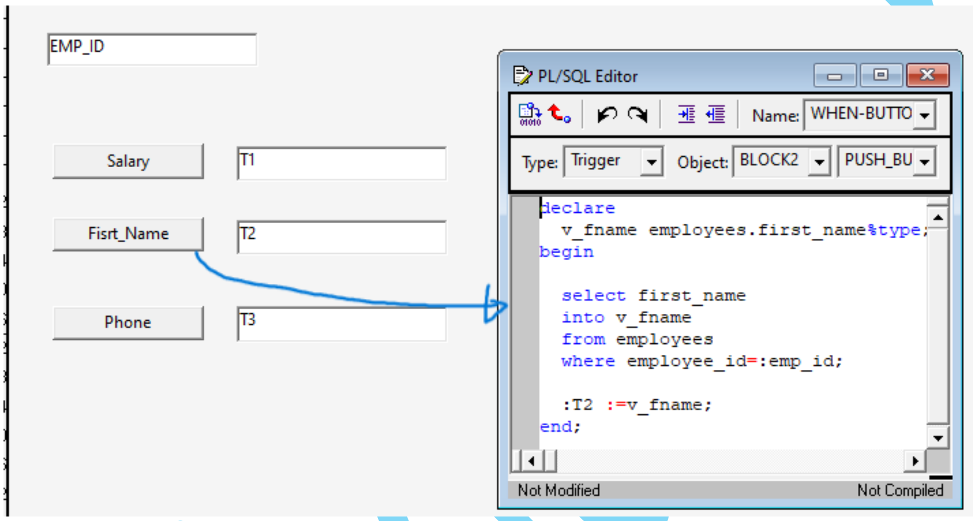
Ex:



Name: WHEN-BUTTO
Type: Trigger
Object: BLOCK2 D1

```
declare
  v_sal employees.salary%type;
begin

  select salary
  into v_sal
  from employees
  where employee_id=:emp_id;

  :T1 :=v_sal;
end;
```

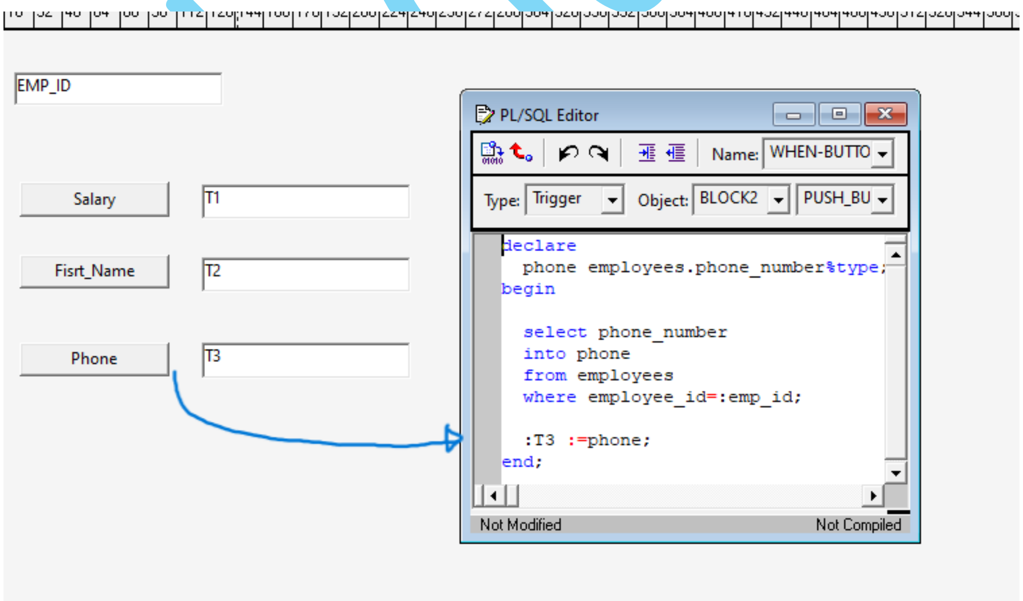
Not Modified Not Compiled



Name: WHEN-BUTTO
Type: Trigger
Object: BLOCK2 PUSH_BU

```
declare
  v_fname employees.first_name%type;
begin

  select first_name
  into v_fname
  from employees
  where employee_id=:emp_id;

  :T2 :=v_fname;
end;
```

Not Modified Not Compiled

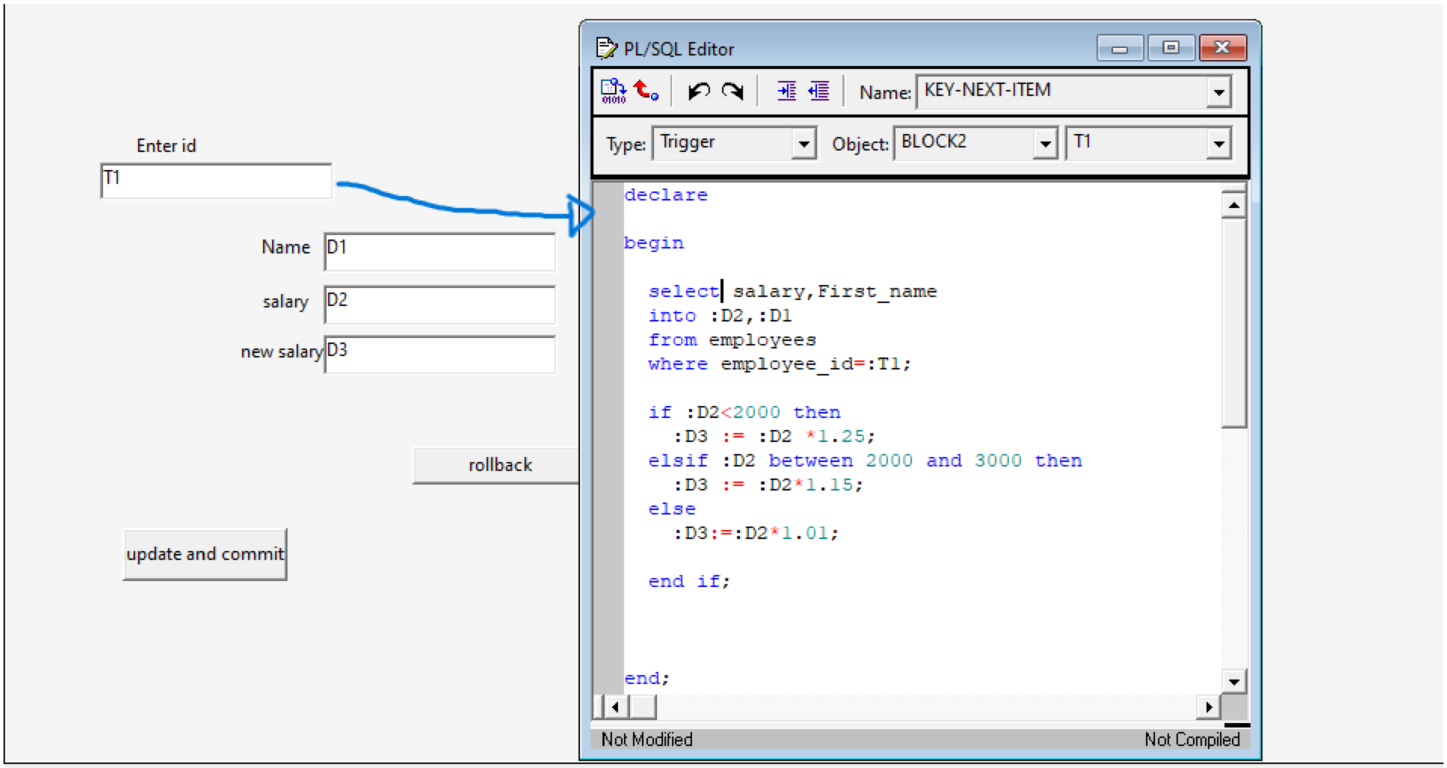


Name: WHEN-BUTTO
Type: Trigger
Object: BLOCK2 PUSH_BU

```
declare
  phone employees.phone_number%type;
begin

  select phone_number
  into phone
  from employees
  where employee_id=:emp_id;

  :T3 :=phone;
end;
```

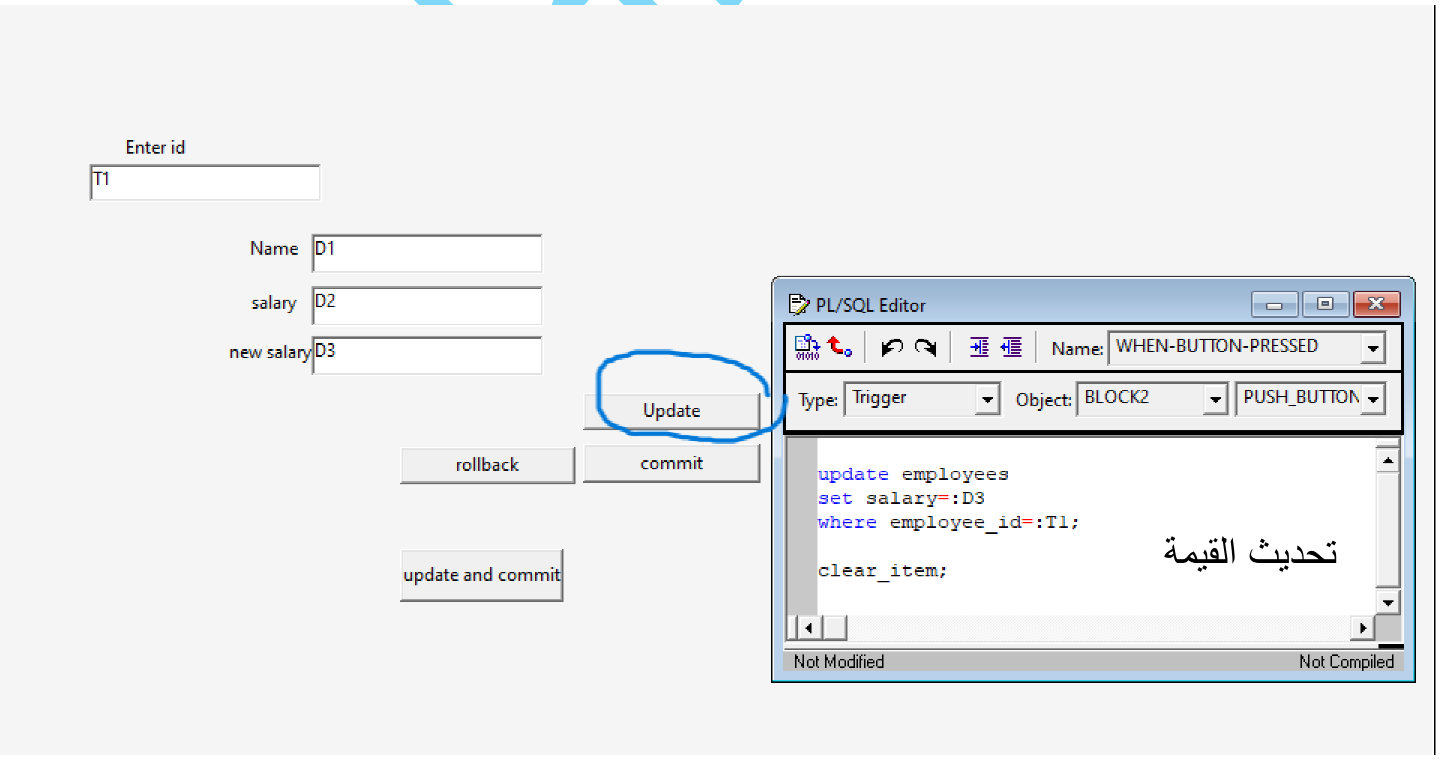
Not Modified Not Compiled

If statement:



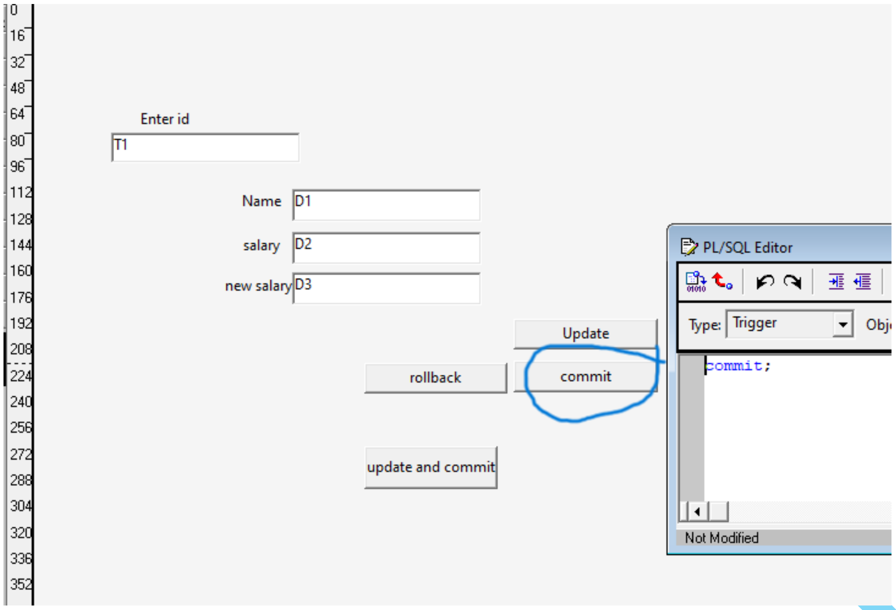
```
declare

begin

  select salary,First_name
  into :D2,:D1
  from employees
  where employee_id=:T1;

  if :D2<2000 then
    :D3 := :D2 *1.25;
  elsif :D2 between 2000 and 3000 then
    :D3 := :D2*1.15;
  else
    :D3:=:D2*1.01;

  end if;


end;
```

- Update/ Commit/ Rollback



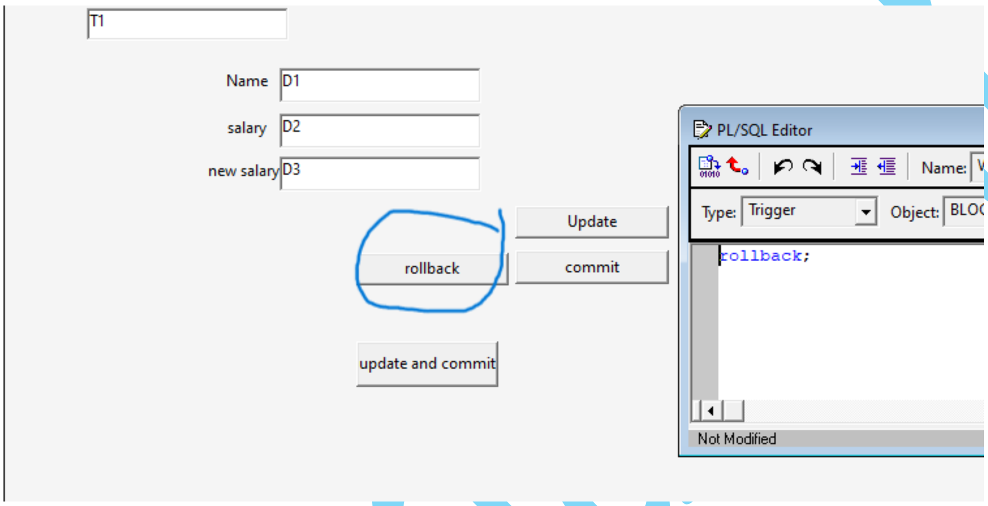
```
update employees
set salary=:D3
where employee_id=:T1;

clear_item;
```

تحديث القيمة



```
commit;
```

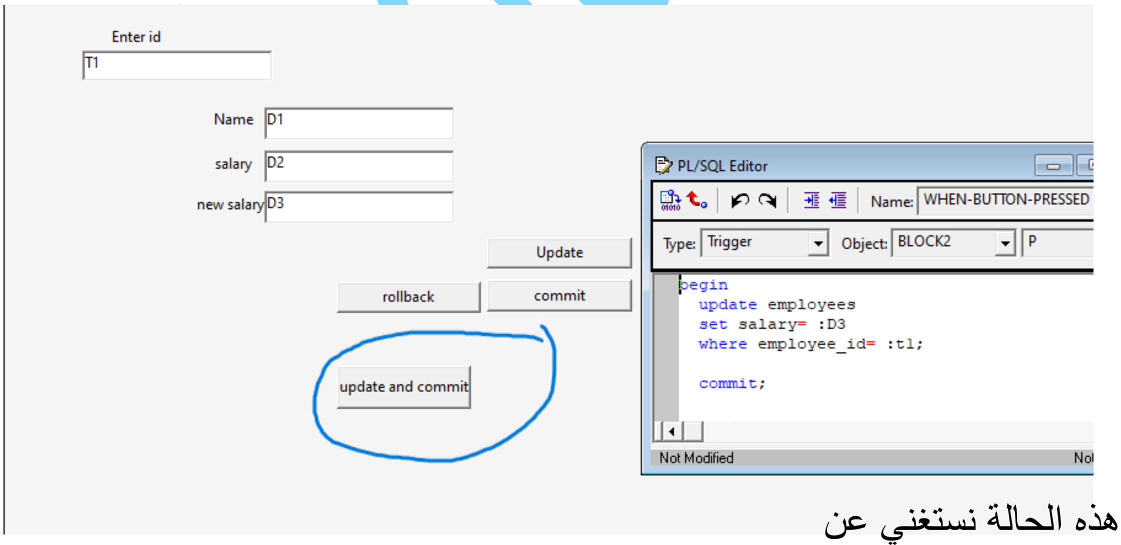
حفظ التحديث



```
rollback;
```

الغاء التحديث

يجب ان تكون قبل الحفظ



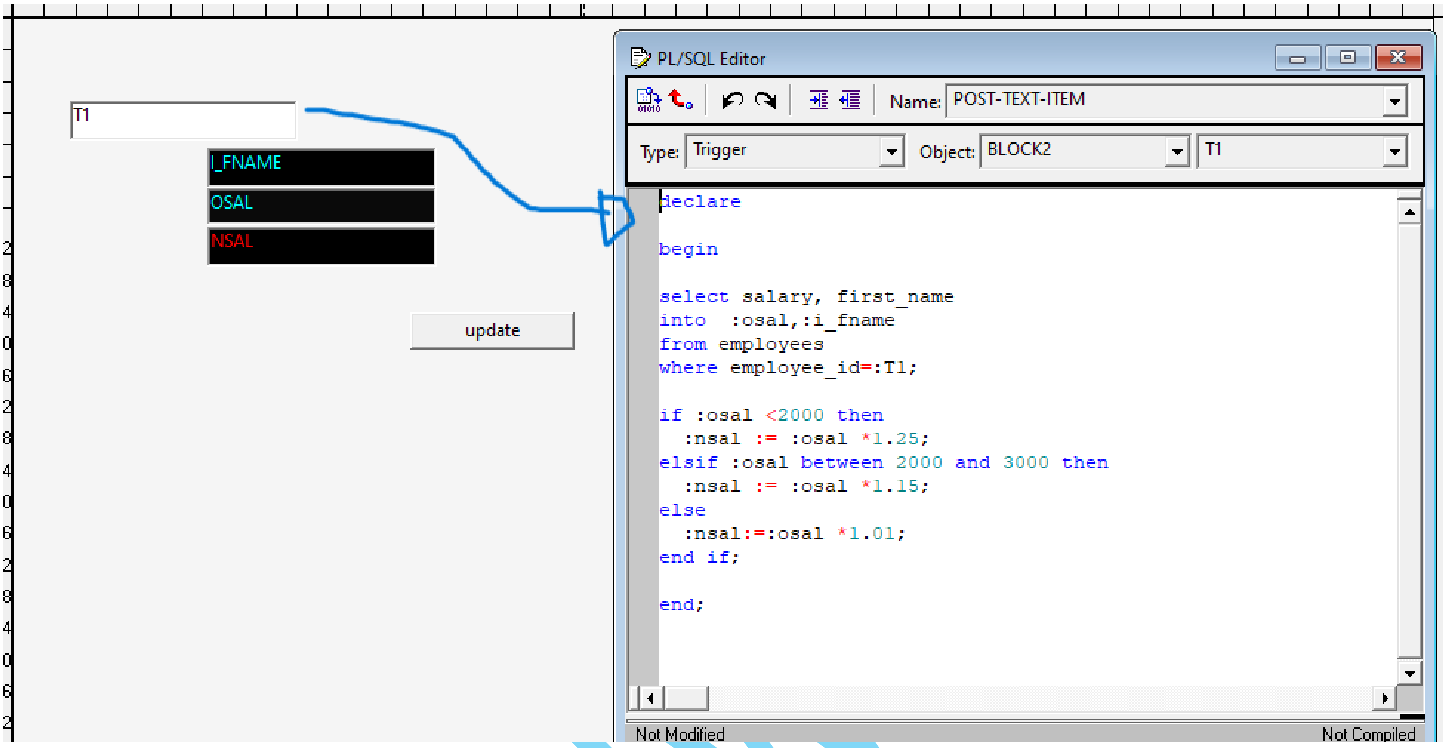
```
begin
  update employees
  set salary= :D3
  where employee_id= :t1;

  commit;
```

في حال كتابتها في هذه الحالة نستغني عن

Rollback

****

Ex:

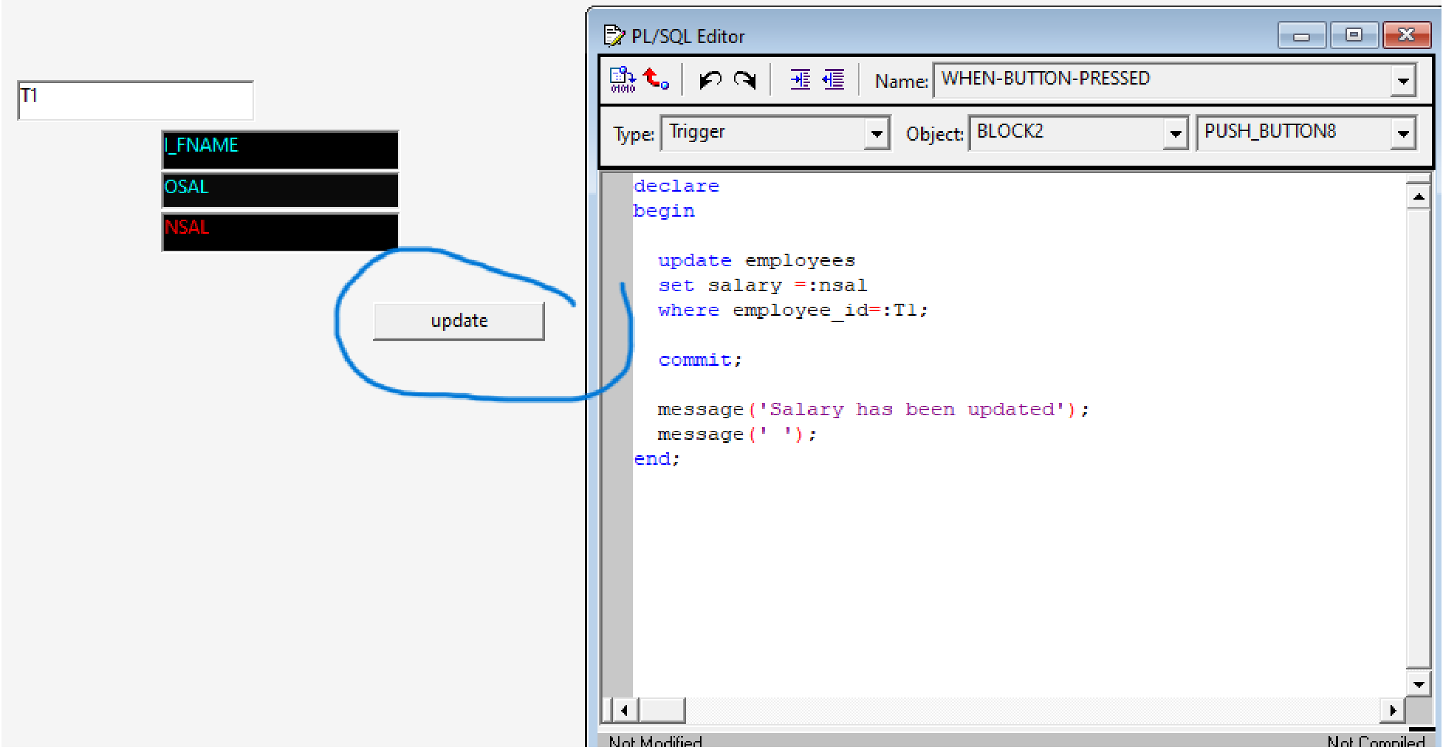


Name: POST-TEXT-ITEM

Type: Trigger Object: BLOCK2 T1

```
declare

begin

select salary, first_name
into  :osal,:i_fname
from employees
where employee_id=:T1;

if :osal <2000 then
  :nsal := :osal *1.25;
elsif :osal between 2000 and 3000 then
  :nsal := :osal *1.15;
else
  :nsal:=:osal *1.01;
end if;

end;
```

Not Modified Not Compiled



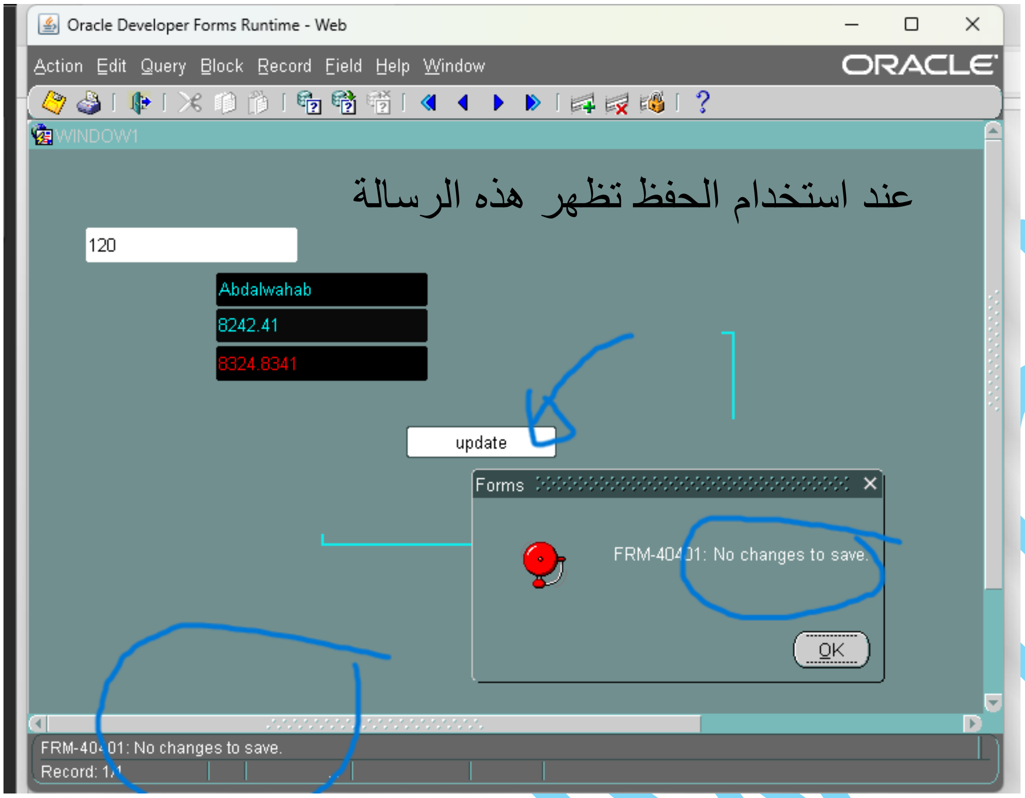
Name: WHEN-BUTTON-PRESSED

Type: Trigger Object: BLOCK2 PUSH_BUTTON8

```
declare
begin

  update employees
  set salary =:nsal
  where employee_id=:T1;

  commit;

  message('Salary has been updated');
  message(' ');
end;
```

Not Modified Not Compiled

Run:



Oracle Developer Forms Runtime - Web
Action Edit Query Block Record Field Help Window
ORACLE
WINDOW1
update
Forms
OK

عند استخدام الحفظ تظهر هذه الرسالة

120

Abdalwahab

8242.41

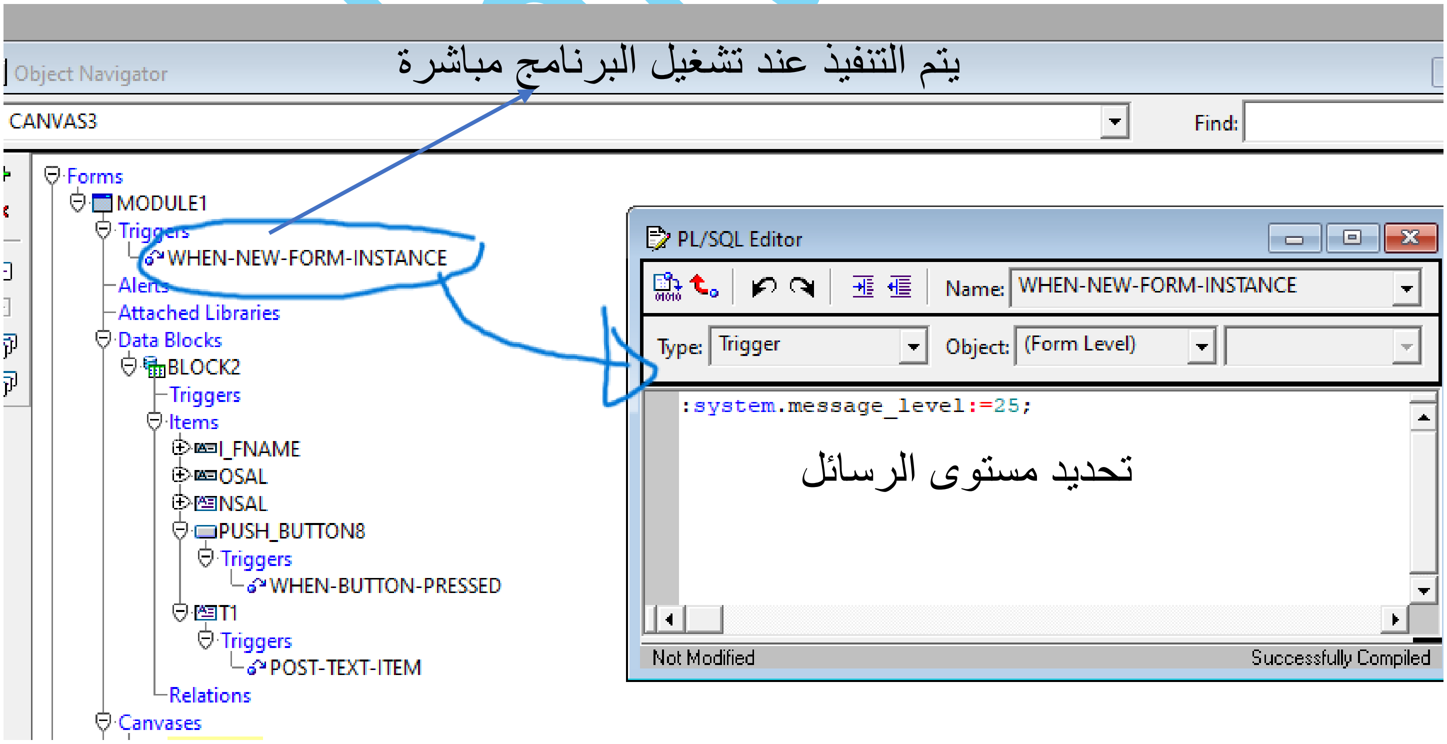
8324.8341

FRM-40401: No changes to save.

FRM-40401: No changes to save.

Record: 1/1

Solution: للتخلص من الرسائل غير المرغوب فيها نحدد مستوى الرسائل



يتم التنفيذ عند تشغيل البرنامج مباشرة

Name: WHEN-NEW-FORM-INSTANCE

Type: Trigger

Object: (Form Level)

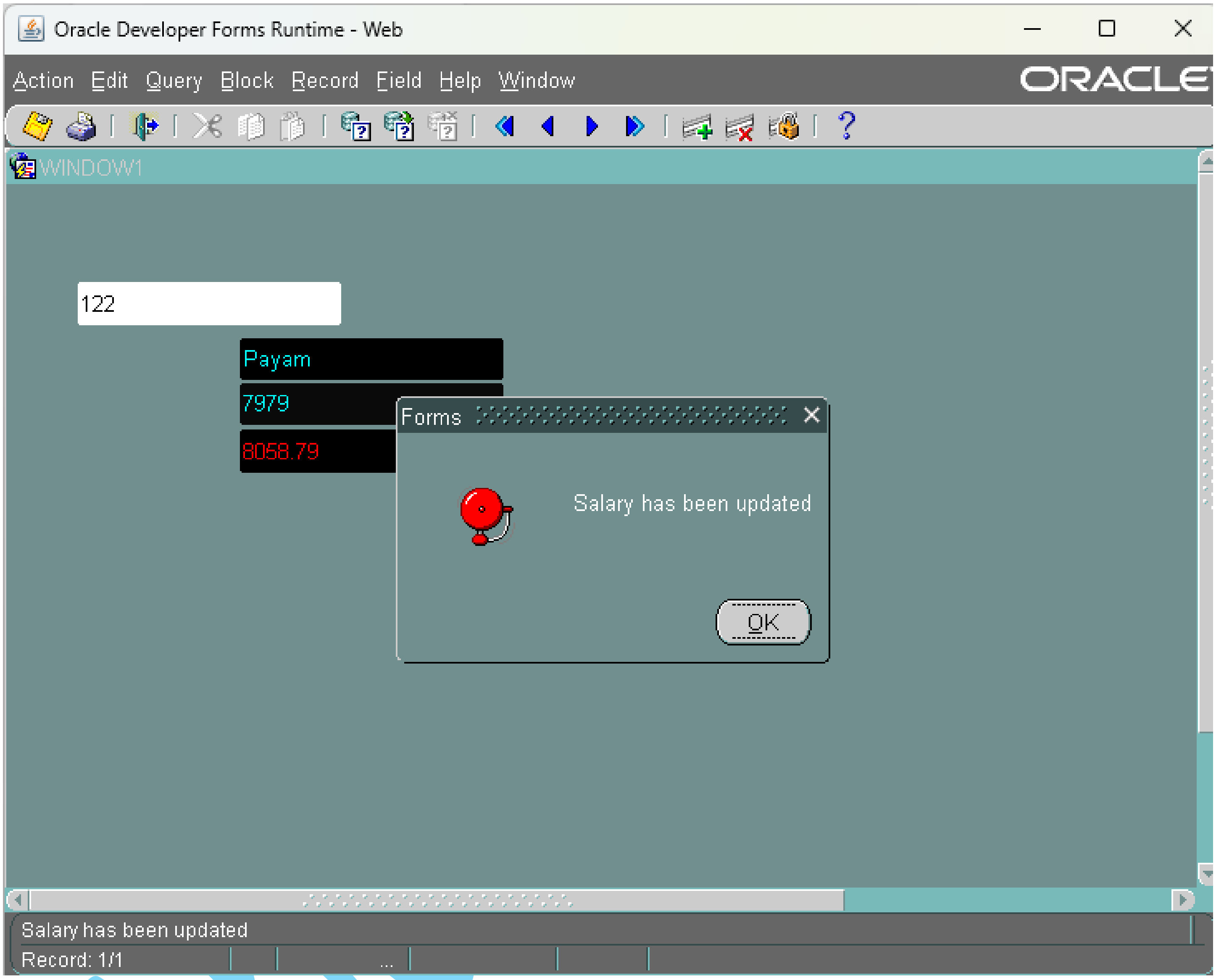
```
:system.message_level:=25;
```

تحديد مستوى الرسائل

Not Modified

Successfully Compiled

After:


Oracle Developer Forms Runtime - Web
Action Edit Query Block Record Field Help Window
ORACLE
WINDOW1
Forms
OK

122

Payam

7979

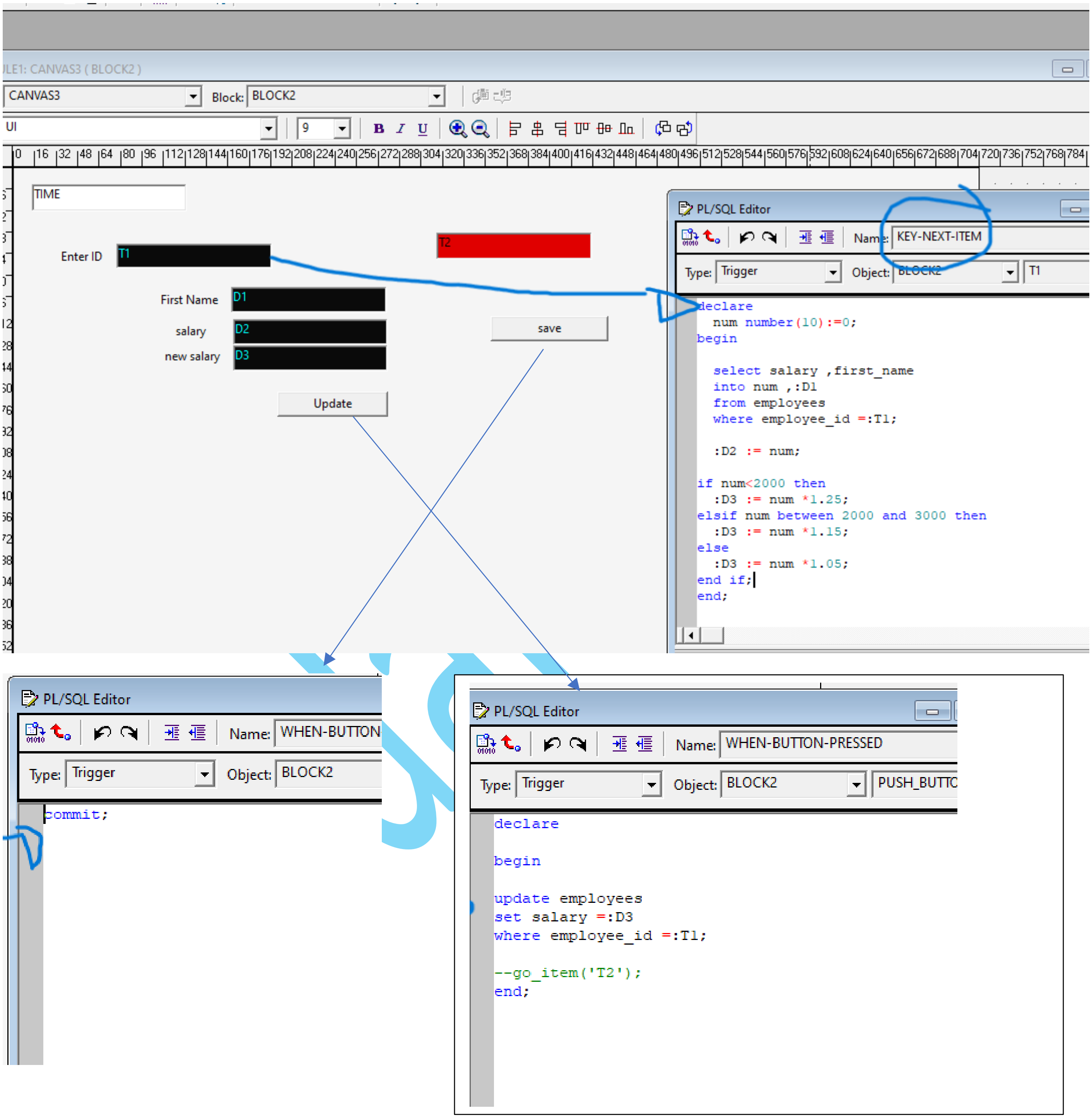
8058.79

Salary has been updated

Salary has been updated

Record: 1/1

Ex (BLOCKS):



PL/SQL Editor

Name: KEY-NEXT-ITEM

Type: Trigger Object: BLOCK2 T1

```
declare
  num number(10):=0;
begin

  select salary ,first_name
  into num ,:D1
  from employees
  where employee_id =:T1;

  :D2 := num;

if num<2000 then
  :D3 := num *1.25;
elsif num between 2000 and 3000 then
  :D3 := num *1.15;
else
  :D3 := num *1.05;
end if;
end;
```

PL/SQL Editor

Name: WHEN-BUTTON

Type: Trigger Object: BLOCK2

```
commit;
```

PL/SQL Editor

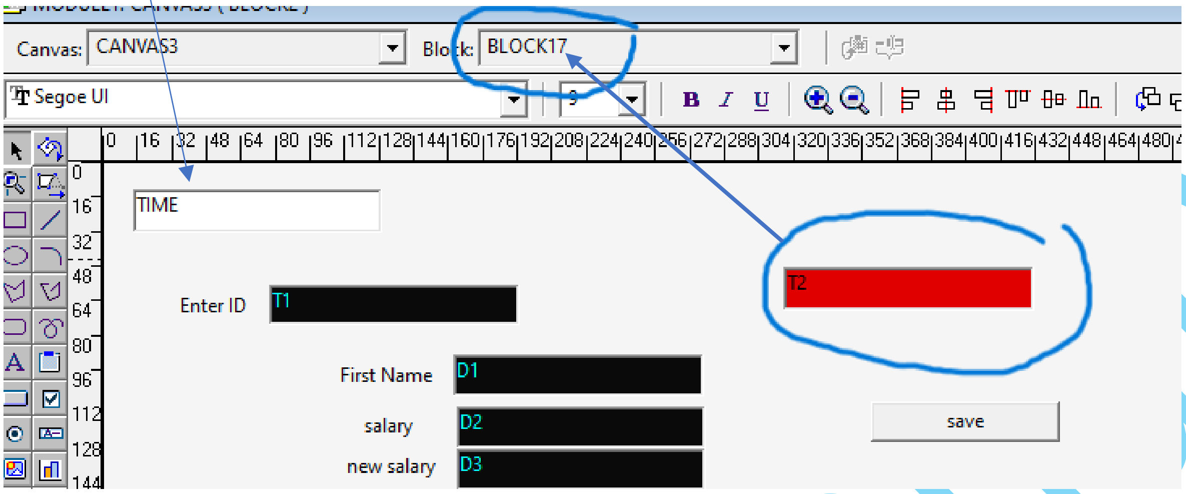
Name: WHEN-BUTTON-PRESSED

Type: Trigger Object: BLOCK2 PUSH_BUTTO

```
declare

begin

update employees
set salary =:D3
where employee_id =:T1;

--go_item('T2');
end;
```

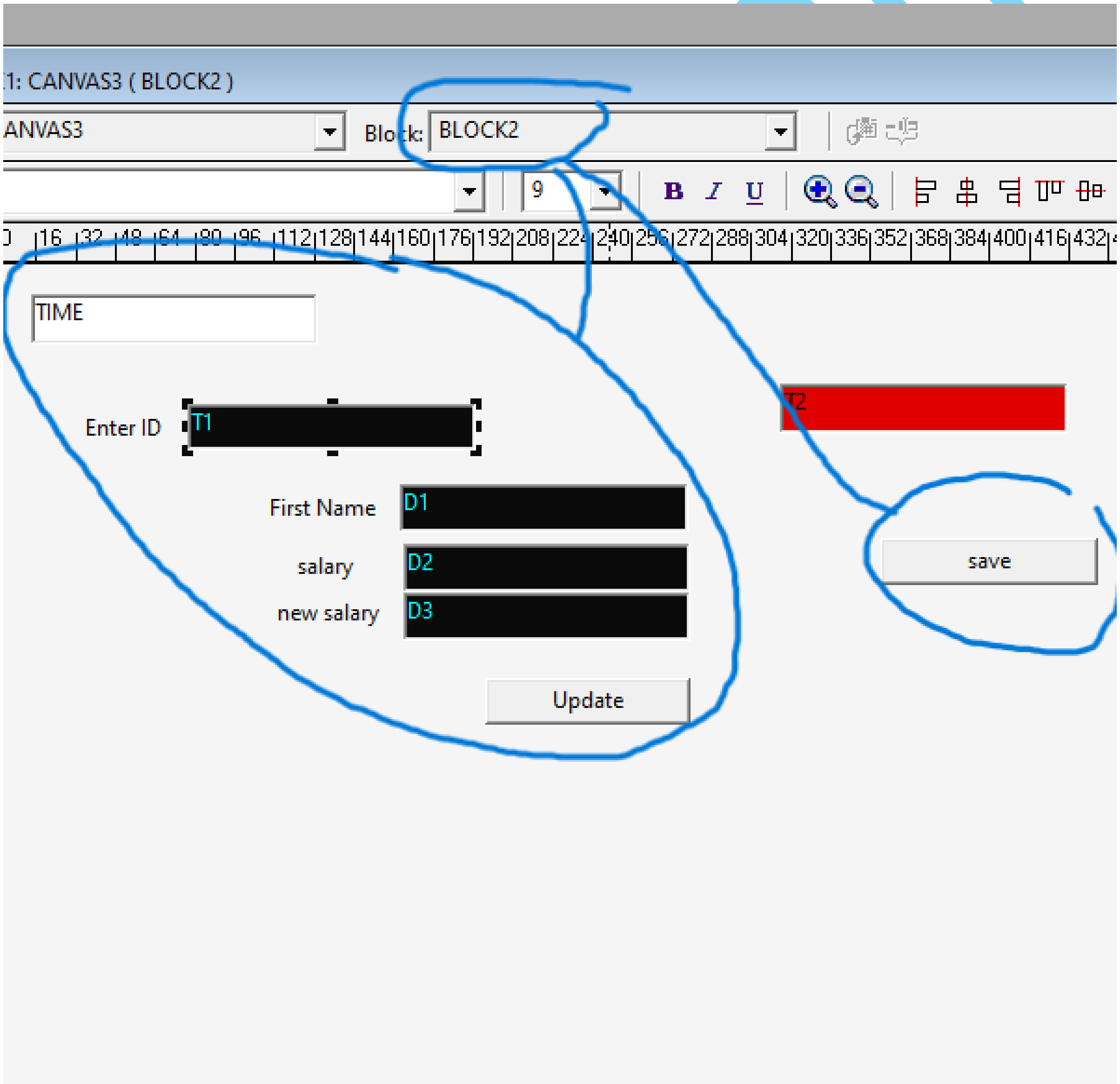
The Time value is given when entering block 17.

Using when new block instance



Canvas: CANVAS3

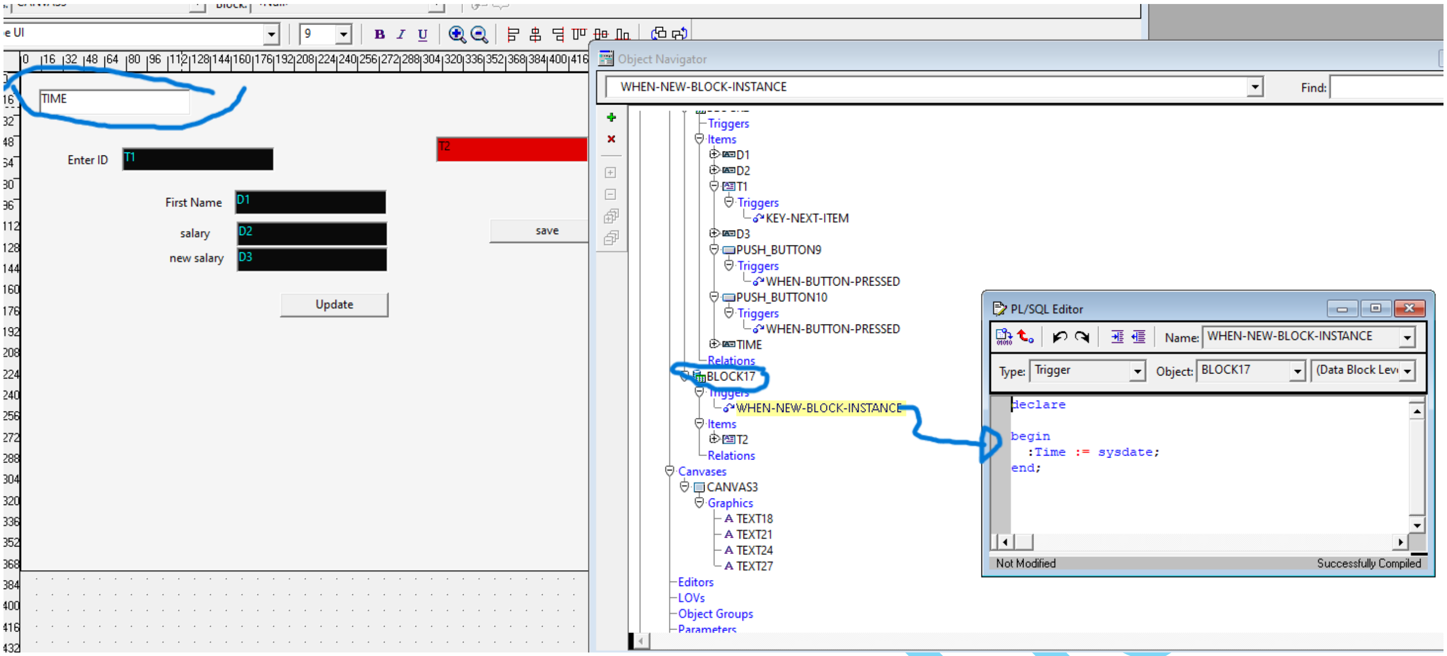
Block: BLOCK17



1: CANVAS3 (BLOCK2)

ANVAS3

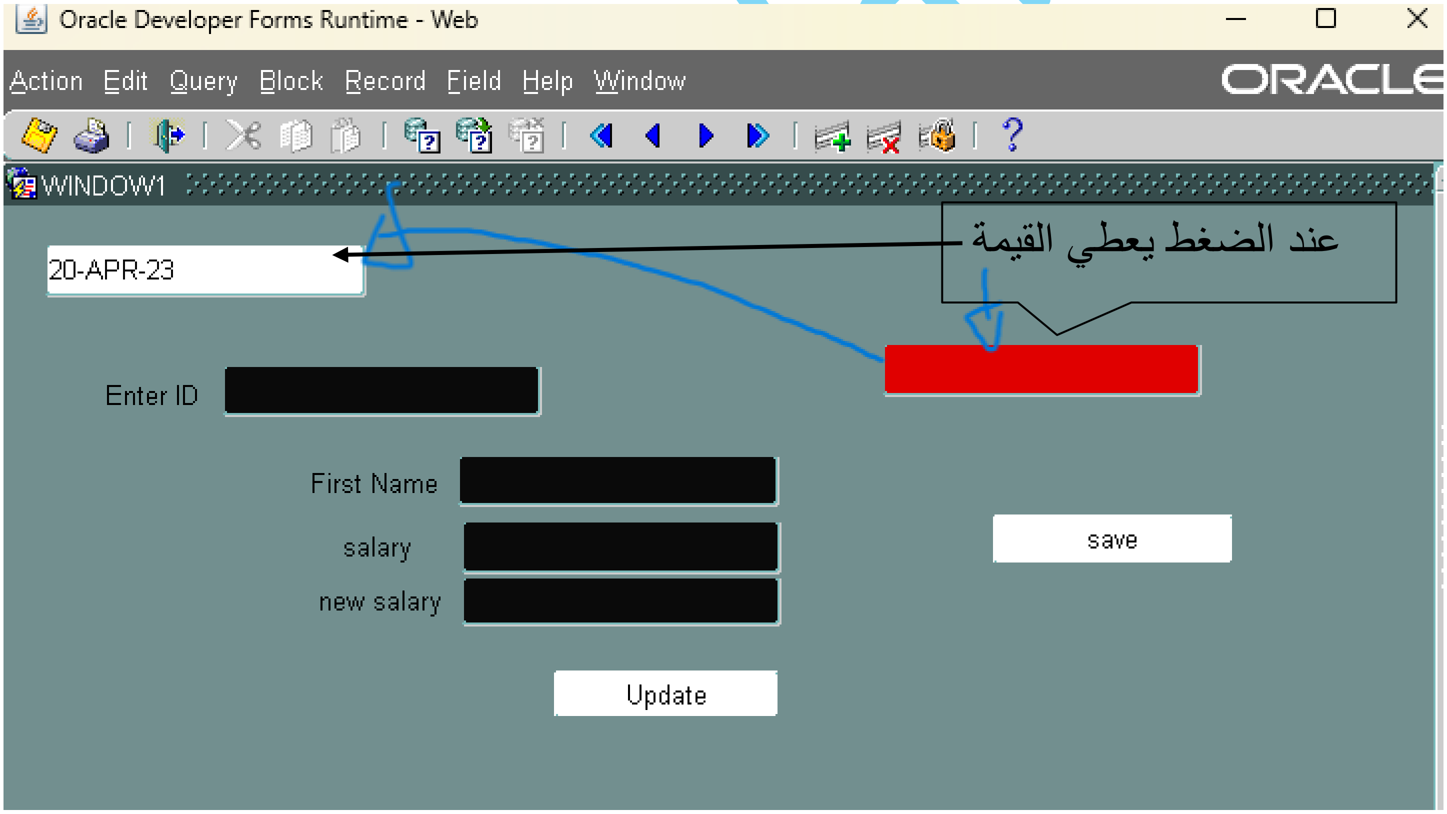
Block: BLOCK2



Name: WHEN-NEW-BLOCK-INSTANCE

Type: Trigger Object: BLOCK17 (Data Block Lev

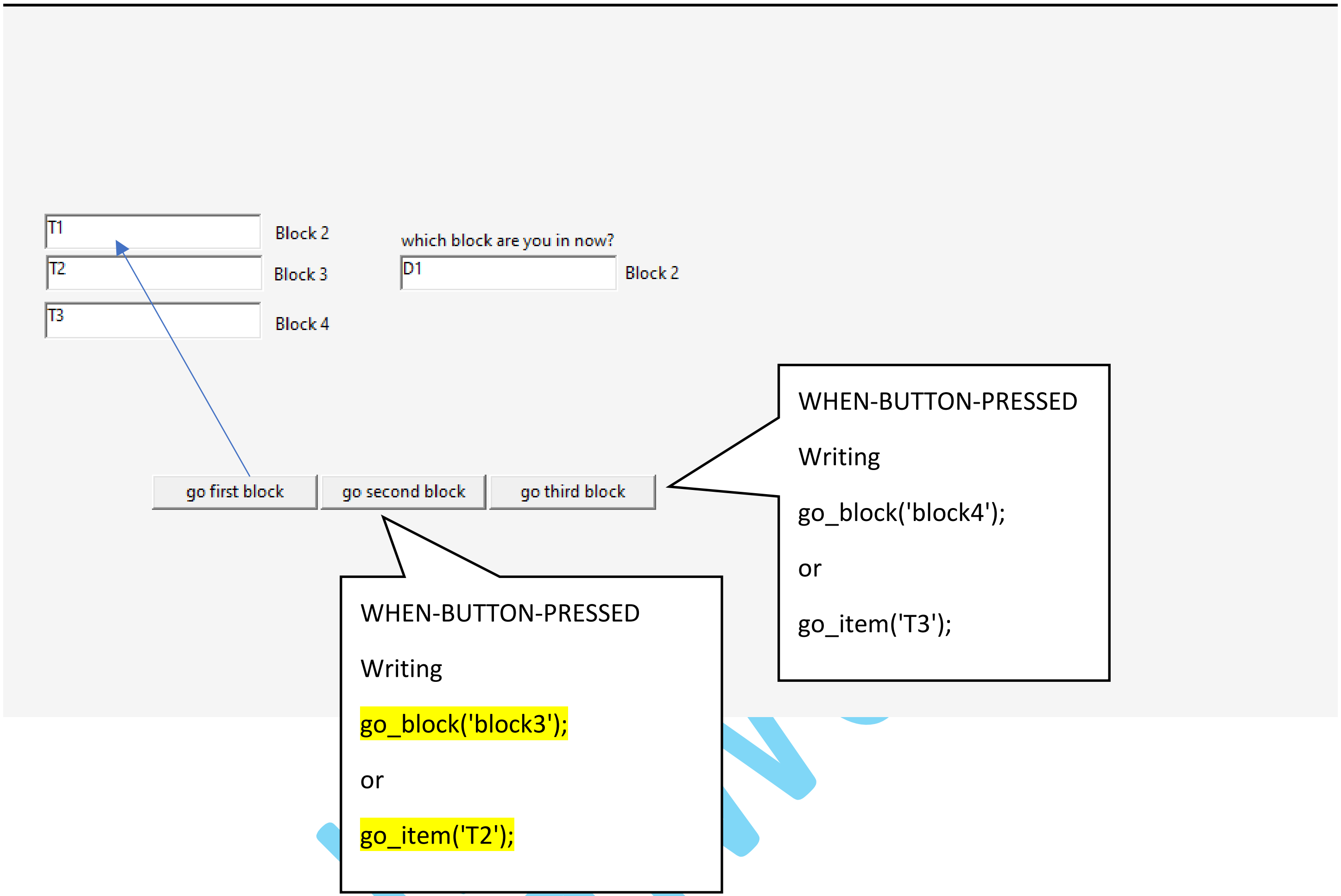
```
declare

begin
  :Time := sysdate;
end;
```



20-APR-23

عند الضغط يعطي القيمة

Go_item/go_block



T1 Block 2

T2 Block 3

T3 Block 4

which block are you in now?

D1 Block 2

WHEN-BUTTON-PRESSED

Writing

go_block('block4');

or

go_item('T3');

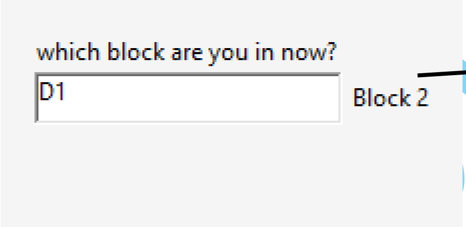
WHEN-BUTTON-PRESSED

Writing

go_block('block3');

or

go_item('T2');



which block are you in now?

D1 Block 2

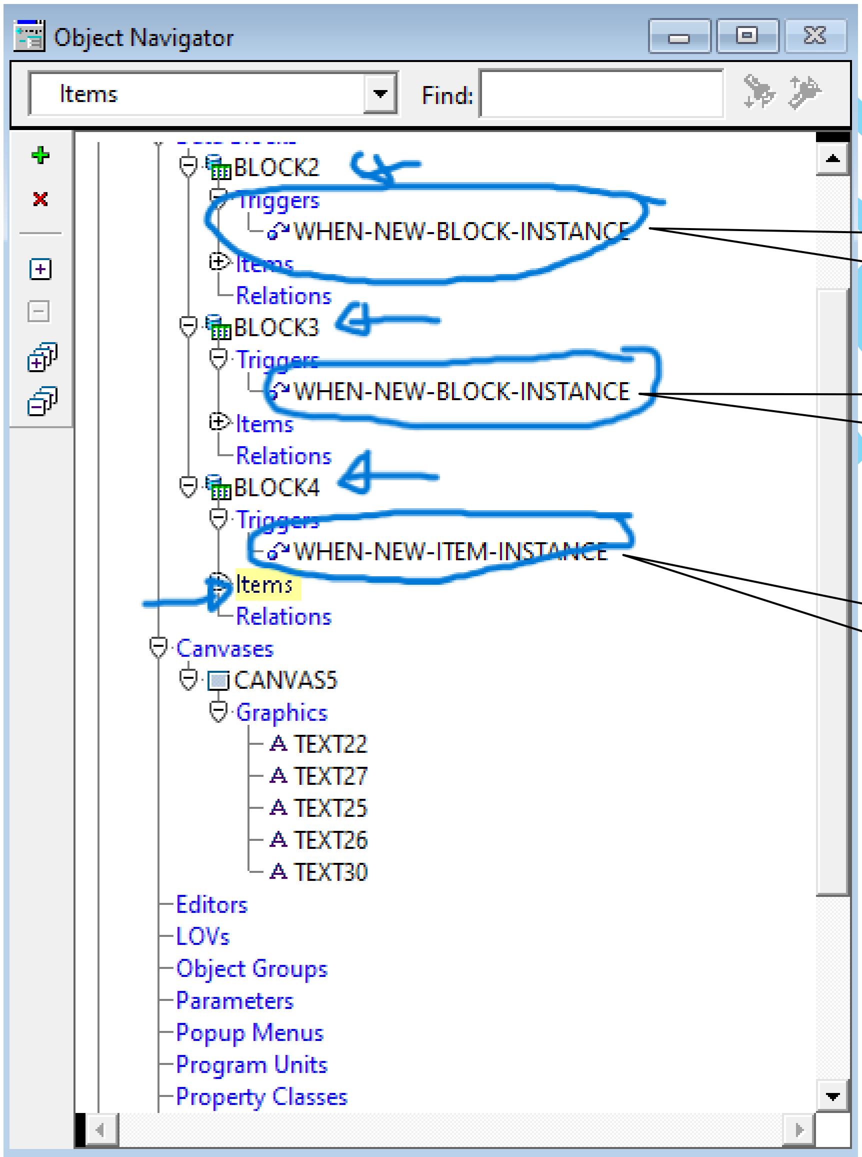
تحديد العنصر في اي بلوك

عند الدخول الى البلوك يعطي اسمه لي:

D1

Trigger:

1. When-new-block-instance
2. When-new-item-instance
3. When-new-form-instance
4. When-new-record-instance



عند الدخول الى البلوك 2 اعطي اسمه

```
--Pl/sql editor

:D1 := 'BLOCK2';
```

عند الدخول الى البلوك 3 اعطي اسمه

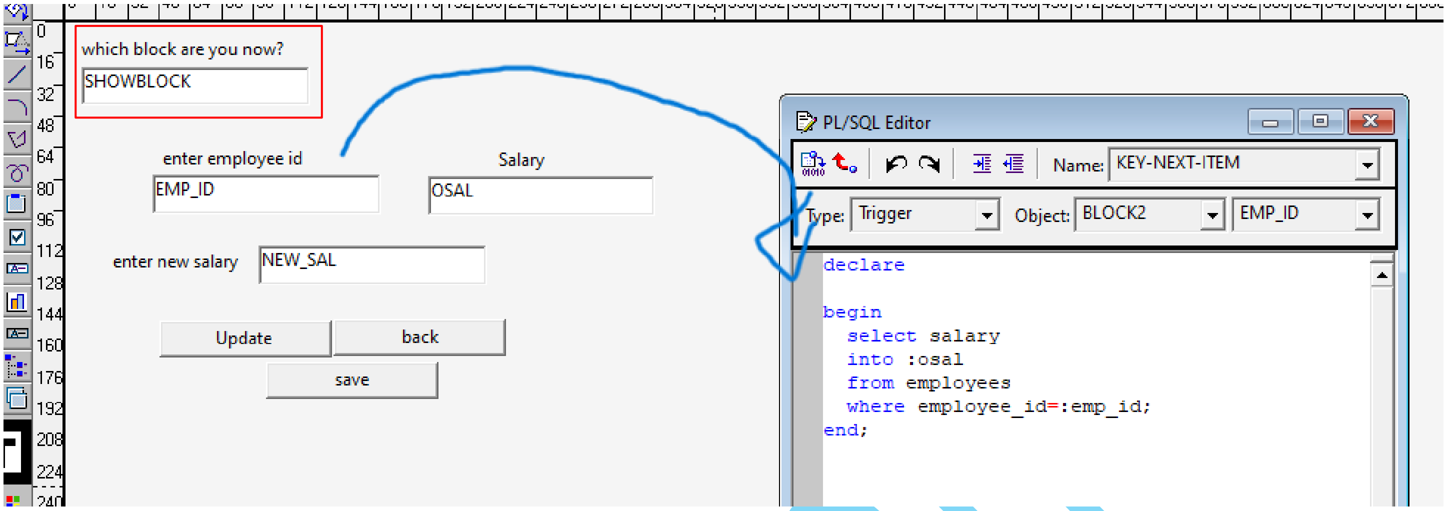
```
--Pl/sql editor

:D1 := 'BLOCK3';
```

عند الدخول الى البلوك 4 اعطي اسمه

```
--Pl/sql editor

:D1 := 'BLOCK4';
```

File (8.go item)

Ex:


which block are you now? SHOWBLOCK

enter employee id EMP_ID

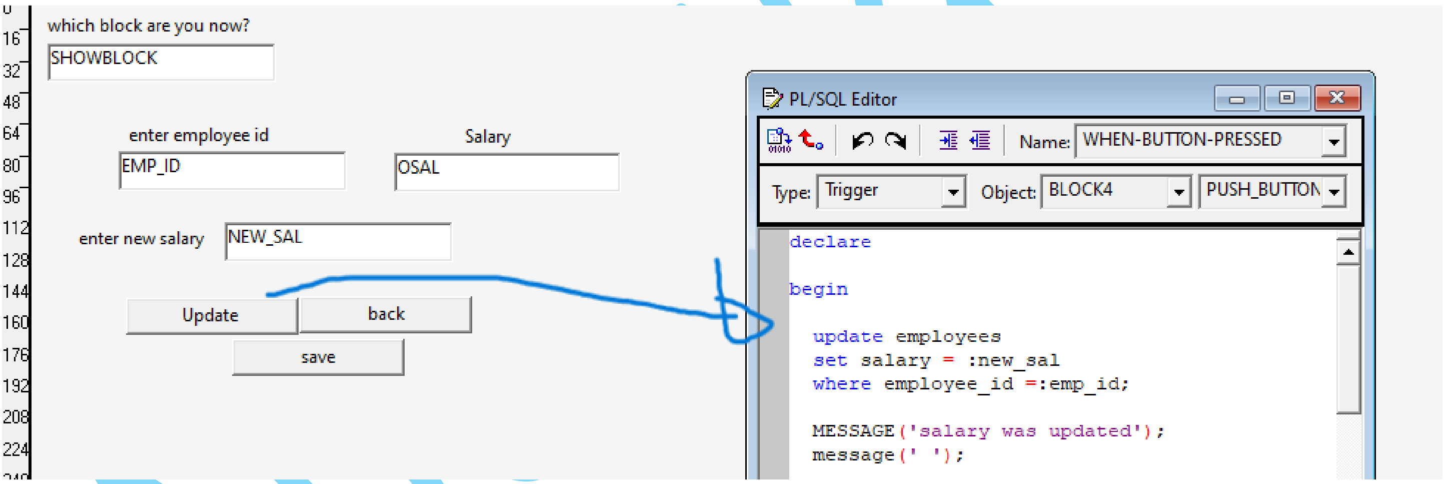
Salary OSAL

enter new salary NEW_SAL

Name: KEY-NEXT-ITEM

Type: Trigger Object: BLOCK2 EMP_ID

```
declare

begin
  select salary
  into :osal
  from employees
  where employee_id=:emp_id;
end;
```


which block are you now? SHOWBLOCK

enter employee id EMP_ID

Salary OSAL

enter new salary NEW_SAL

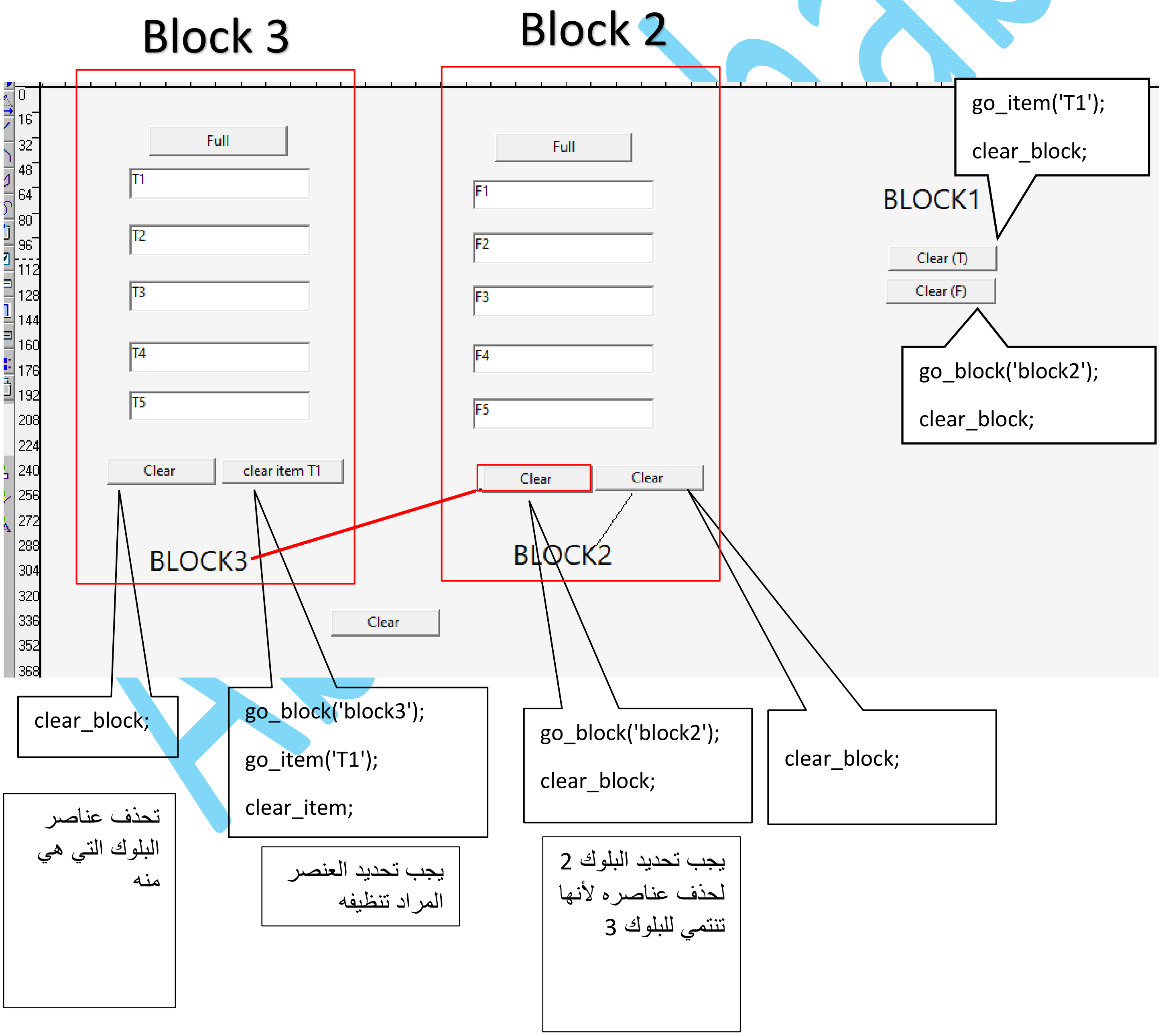
Name: WHEN-BUTTON-PRESSED

Type: Trigger Object: BLOCK4 PUSH_BUTTON

```
declare

begin

  update employees
  set salary = :new_sal
  where employee_id =:emp_id;

  MESSAGE('salary was updated');
  message(' ');
```

Clear

1. Clear block
2. Clear item
3. Clear form
4. Clear list
5. Clear record



```
go_item('T1');

clear_block;
```

```
go_block('block2');

clear_block;
```

```
clear_block;
```

```
go_block('block3');

go_item('T1');

clear_item;
```

```
go_block('block2');

clear_block;
```

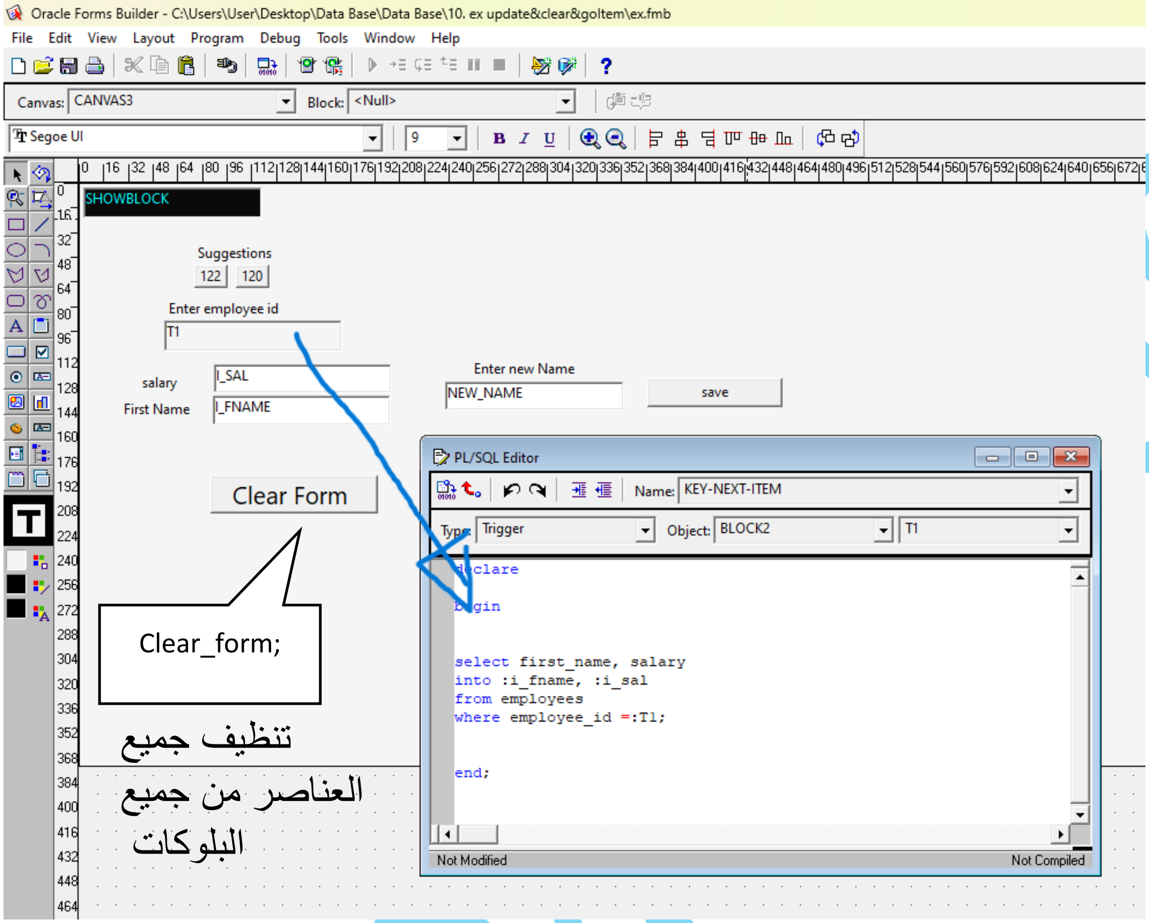
```
clear_block;
```

تحذف عناصر البلوك التي هي منه

يجب تحديد العنصر المراد تنظيفه

يجب تحديد البلوك 2 لحذف عناصره لأنها تنتمي للبلوك 3

Example:



Oracle Forms Builder - C:\Users\User\Desktop\Data Base\Data Base\10. ex update&clear&goItem\ex.fmb

Canvas: CANVAS3 Block: <Null>

PL/SQL Editor

Name: KEY-NEXT-ITEM

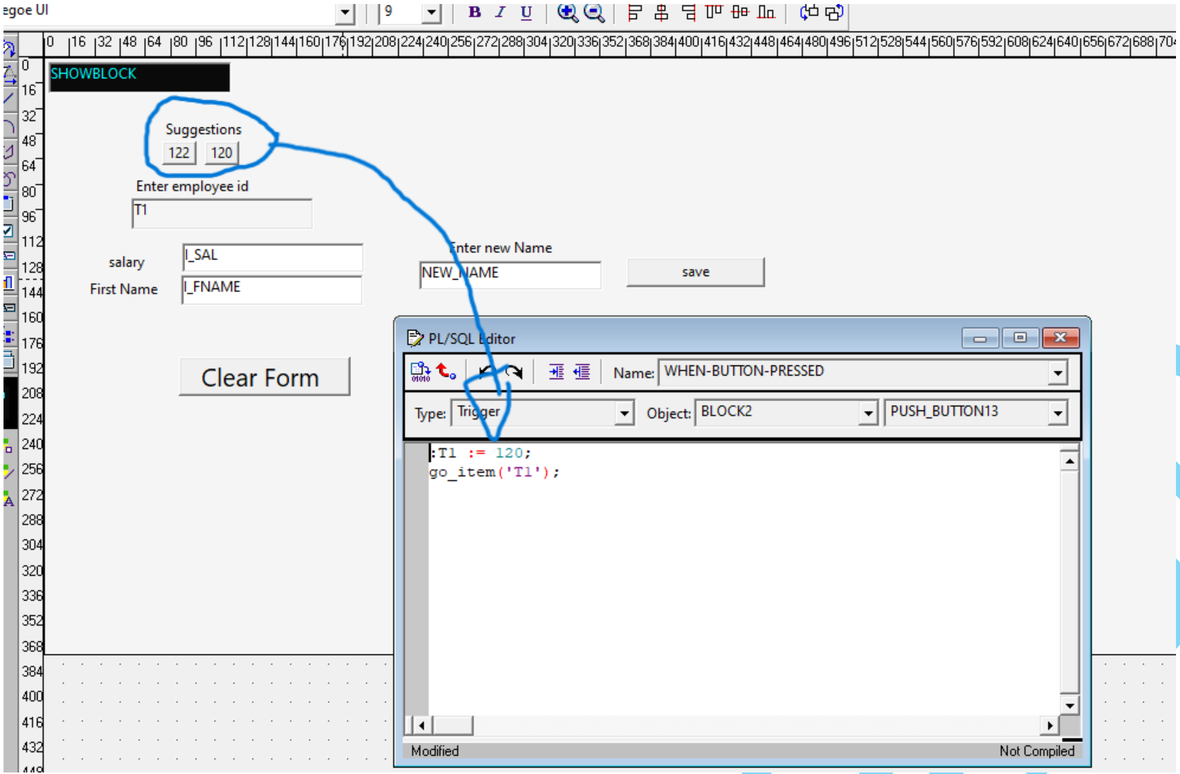
Type: Trigger Object: BLOCK2 T1

```
declare

begin


select first_name, salary
into :i_fname, :i_sal
from employees
where employee_id =:T1;


end;
```

Not Modified Not Compiled

Clear_form;

تنظيف جميع العناصر من جميع البلوكات



Name: WHEN-BUTTON-PRESSED

Type: Trigger

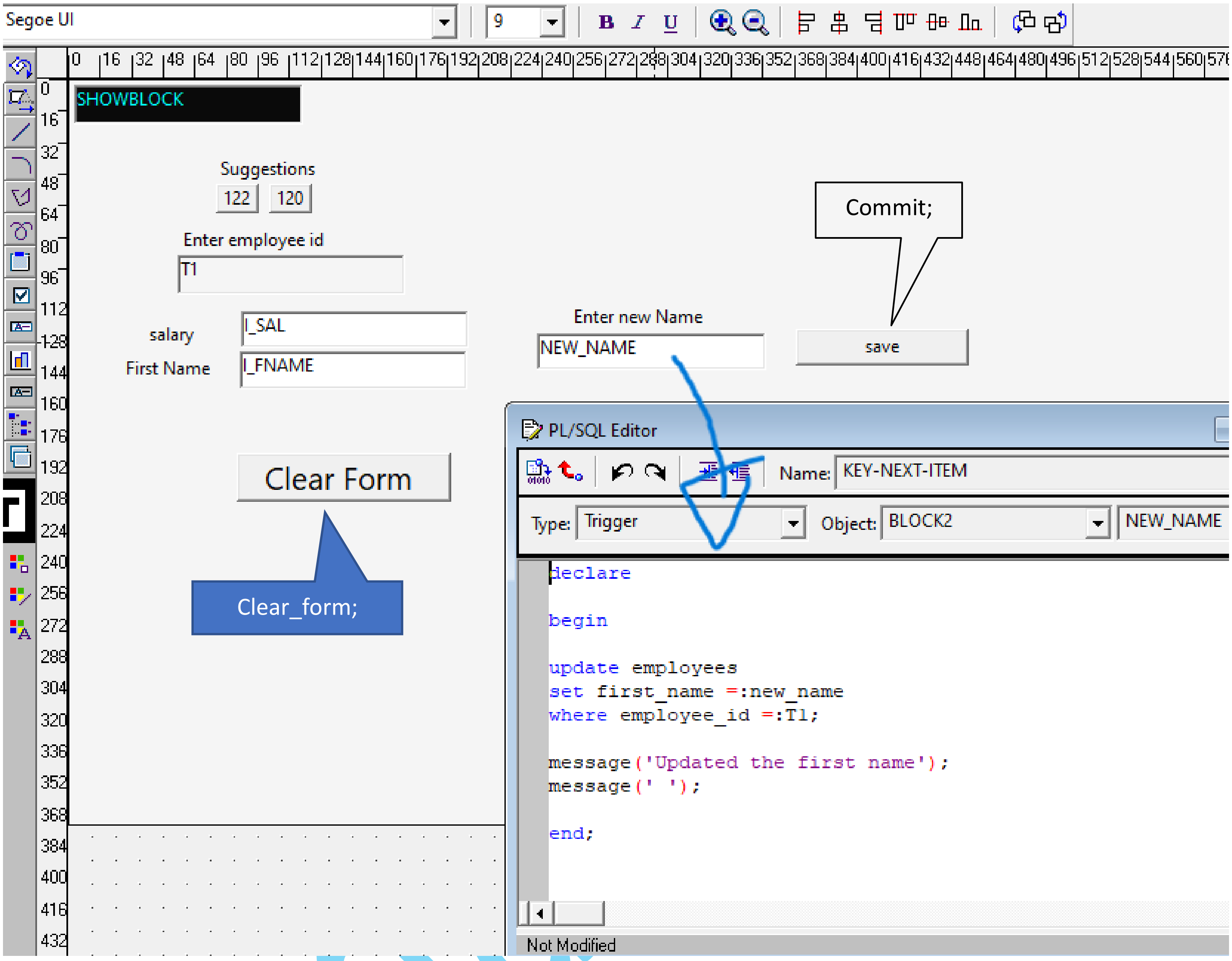
Object: BLOCK2

PUSH_BUTTON13

```
:T1 := 120;
go_item('T1');
```

Modified

Not Compiled

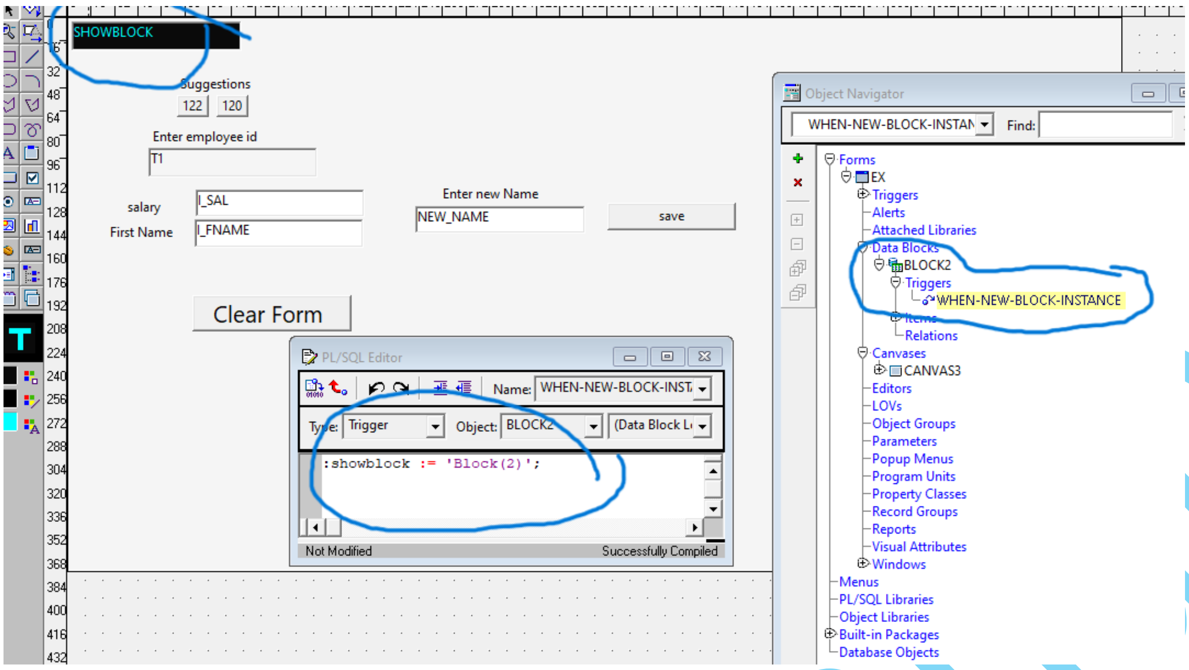


Name: KEY-NEXT-ITEM

Type: Trigger

Object: BLOCK2 NEW_NAME

```
declare

begin

update employees
set first_name =:new_name
where employee_id =:T1;

message('Updated the first name');
message(' ');

end;
```



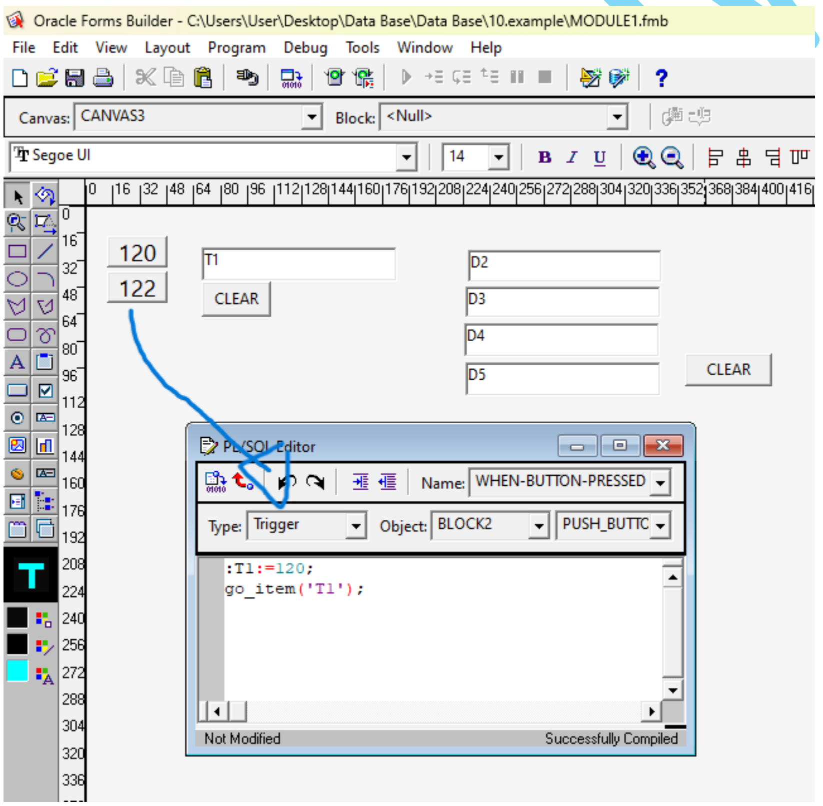
Name: WHEN-NEW-BLOCK-INST.

Type: Trigger Object: BLOCK2 (Data Block L

```
:showblock := 'Block(2)';
```

Not Modified Successfully Compiled

Example:

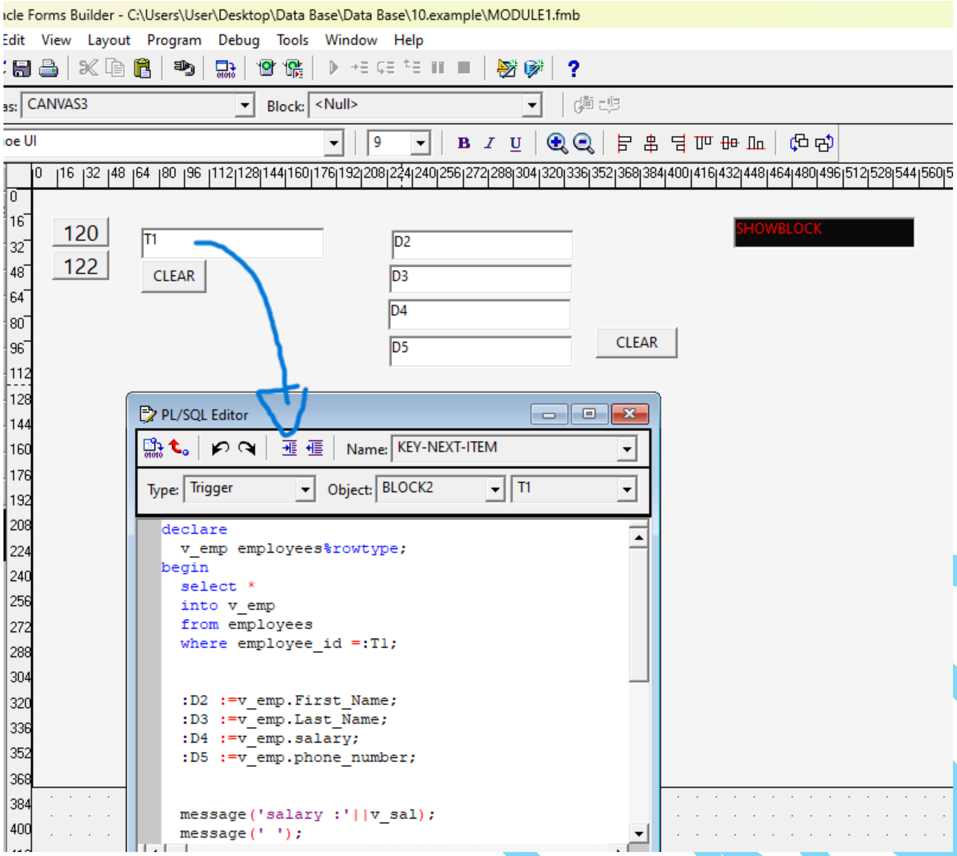


Name: WHEN-BUTTON-PRESSED

Type: Trigger Object: BLOCK2 PUSH_BUTTC

```
:T1:=120;
go_item('T1');
```

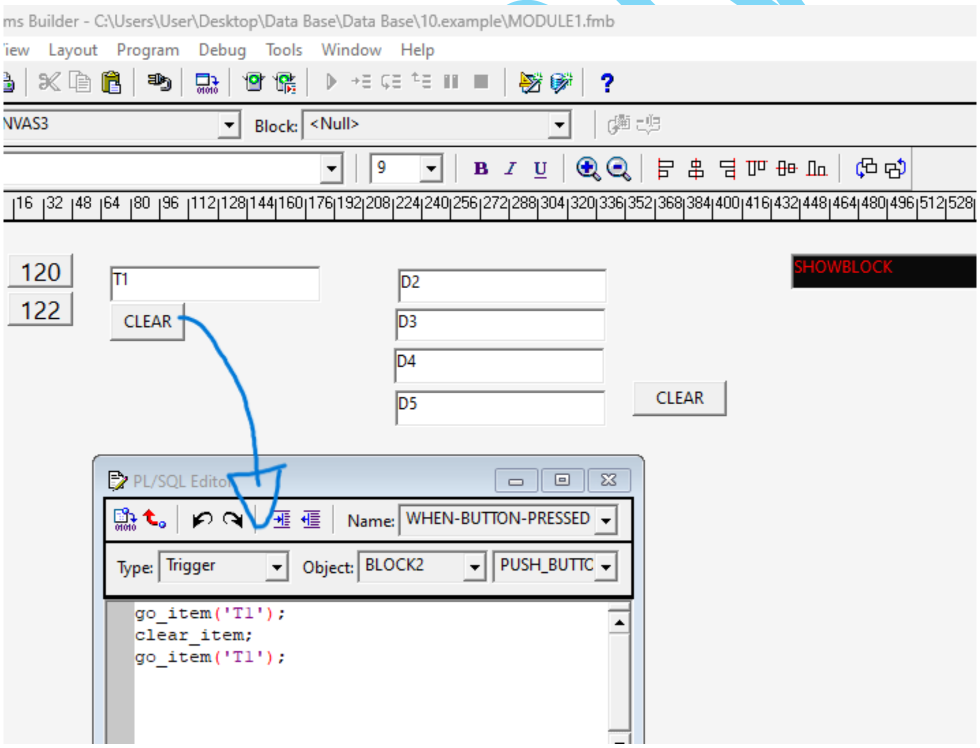
Not Modified Successfully Compiled


icle Forms Builder - C:\Users\User\Desktop\Data Base\Data Base\10.example\MODULE1.fmb
Edit View Layout Program Debug Tools Window Help
CANVAS3
Block: <Null>
oe UI
9
120
122
T1
CLEAR
D2
D3
D4
D5
CLEAR
SHOWBLOCK
PL/SQL Editor

Name: KEY-NEXT-ITEM

Type: Trigger Object: BLOCK2 T1

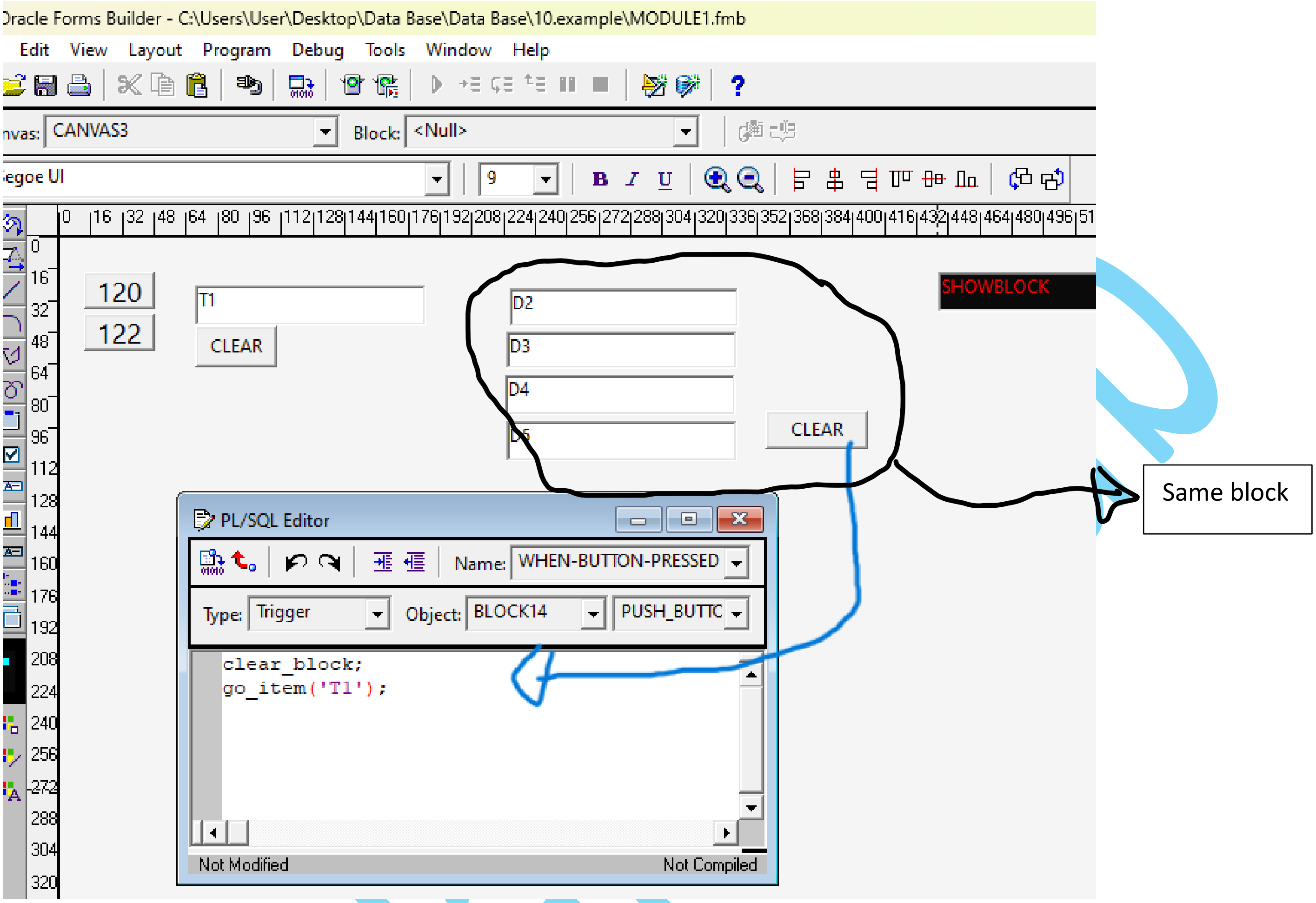
```
declare
  v_emp employees%rowtype;
begin
  select *
  into v_emp
  from employees
  where employee_id =:T1;


  :D2 :=v_emp.First_Name;
  :D3 :=v_emp.Last_Name;
  :D4 :=v_emp.salary;
  :D5 :=v_emp.phone_number;


  message('salary :'||v_sal);
  message(' ');
```


ms Builder - C:\Users\User\Desktop\Data Base\Data Base\10.example\MODULE1.fmb
iew Layout Program Debug Tools Window Help
NVAS3
Block: <Null>
9
120
122
T1
CLEAR
D2
D3
D4
D5
CLEAR
SHOWBLOCK
PL/SQL Editor

Name: WHEN-BUTTON-PRESSED

Type: Trigger Object: BLOCK2 PUSH_BUTTC

```
go_item('T1');
clear_item;
go_item('T1');
```



Dracle Forms Builder - C:\Users\User\Desktop\Data Base\Data Base\10.example\MODULE1.fmb

nvas: CANVAS3 Block: <Null>

PL/SQL Editor

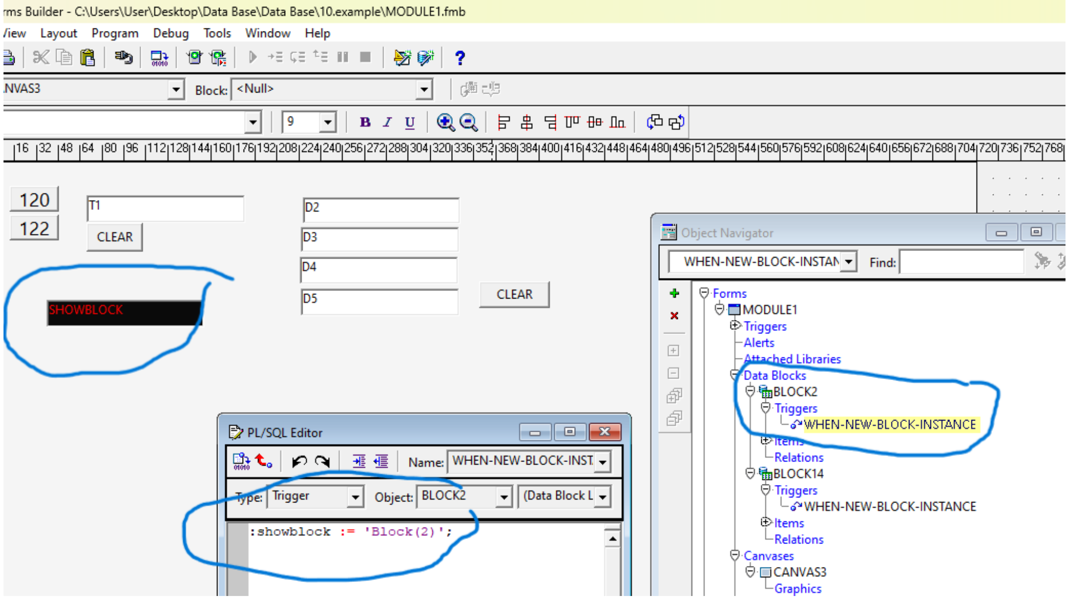
Name: WHEN-BUTTON-PRESSED

Type: Trigger Object: BLOCK14 PUSH_BUTTC

```
clear_block;
go_item('T1');
```

Not Modified Not Compiled

Same block



rms Builder - C:\Users\User\Desktop\Data Base\Data Base\10.example\MODULE1.fmb

NVAS3 Block: <Null>

PL/SQL Editor

Name: WHEN-NEW-BLOCK-INST

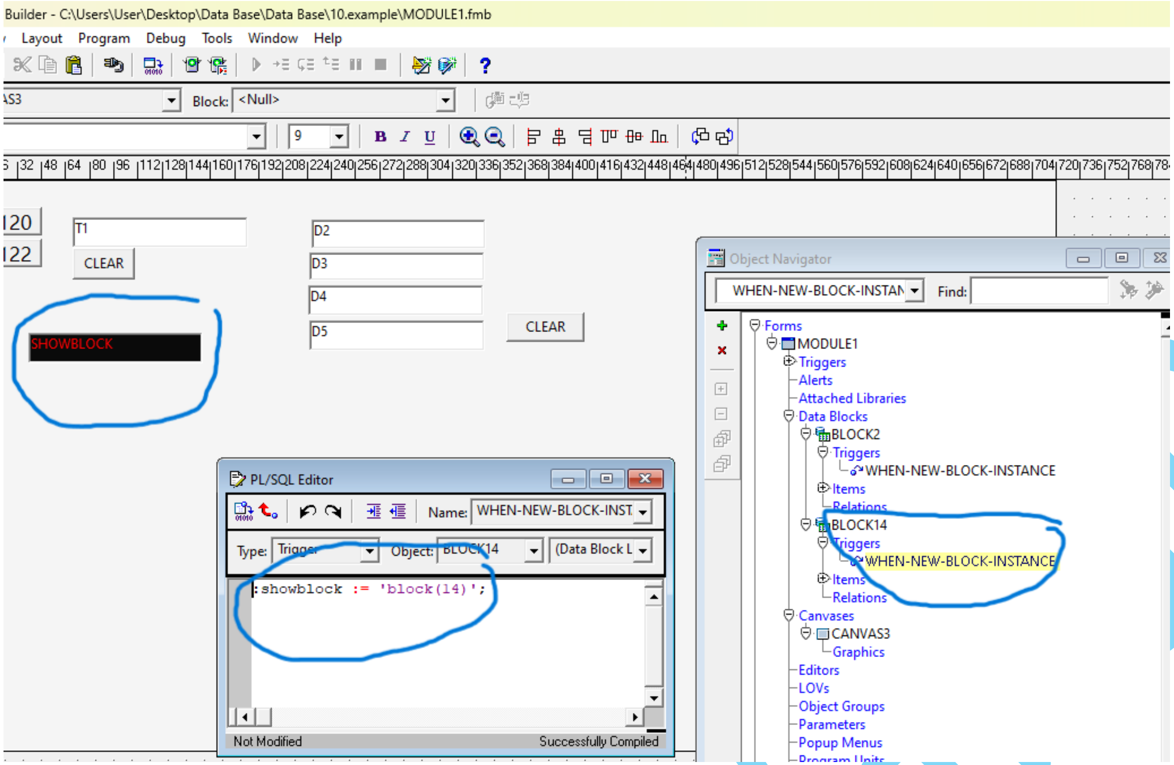
Type: Trigger Object: BLOCK2 (Data Block L

```
:showblock := 'Block(2)';
```

Object Navigator

WHEN-NEW-BLOCK-INSTAN Find:

```
Forms
  MODULE1
    Triggers
    Alerts
    Attached Libraries
    Data Blocks
      BLOCK2
        Triggers
          WHEN-NEW-BLOCK-INSTANCE
        Items
        Relations
      BLOCK14
        Triggers
          WHEN-NEW-BLOCK-INSTANCE
        Items
        Relations
    Canvases
      CANVAS3
        Graphics
```



Builder - C:\Users\User\Desktop\Data Base\Data Base\10.example\MODULE1.fmb

Block: <Null>

PL/SQL Editor

Name: WHEN-NEW-BLOCK-INST

Type: Trigger

Object: BLOCK14

(Data Block L

```
:showblock := 'block(14)';
```

Not Modified

Successfully Compiled

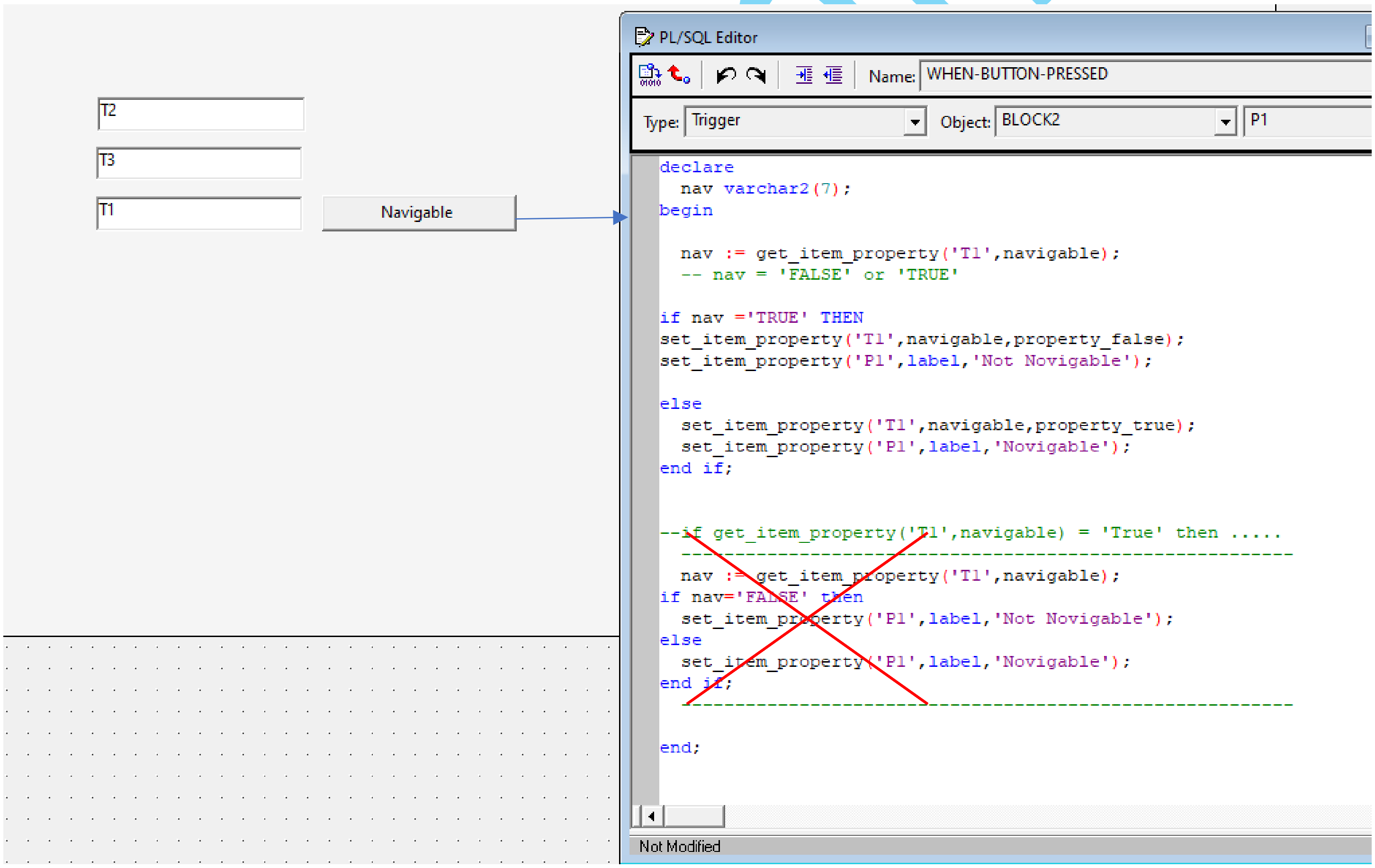
Set/get.

Set_item_property (‘Name-item’, property-name, value)　　　تعديل القيمة

Get_item_property (‘Name-item’, property-name)　　　استرجاع القيمة

Yes/no	Value (set)	Return (Get)
Yes	Property_true	‘TRUE’
No	Property_false	‘FALSE’

Ex:

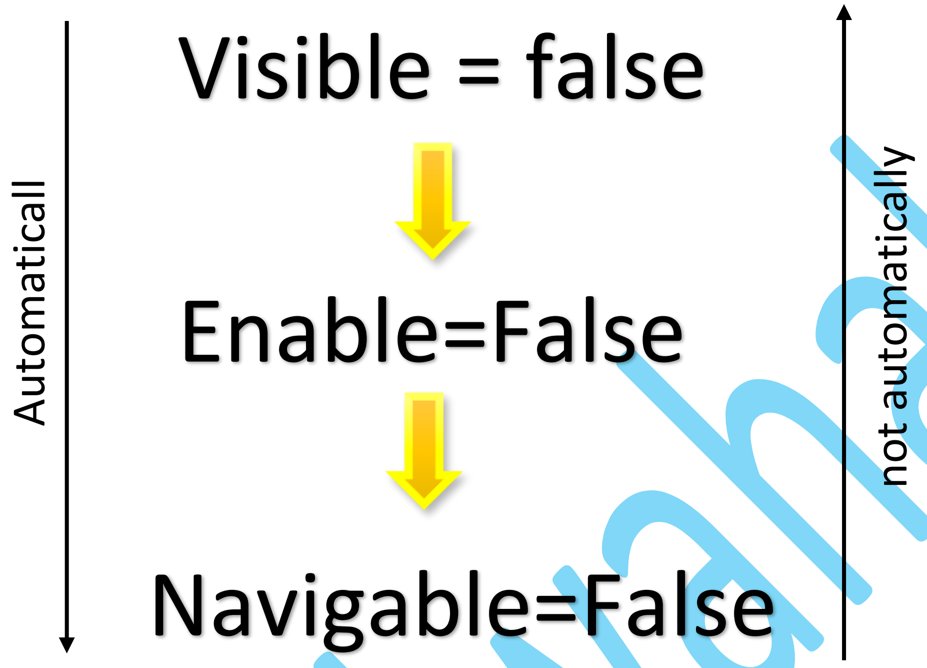


Name: WHEN-BUTTON-PRESSED

Type: Trigger　Object: BLOCK2　P1

```
declare
  nav varchar2(7);
begin

  nav := get_item_property('T1',navigable);
  -- nav = 'FALSE' or 'TRUE'

if nav ='TRUE' THEN
set_item_property('T1',navigable,property_false);
set_item_property('P1',label,'Not Novigable');

else
  set_item_property('T1',navigable,property_true);
  set_item_property('P1',label,'Novigable');
end if;


--if get_item_property('T1',navigable) = 'True' then .....
  ----------------------------------------------------------
  nav := get_item_property('T1',navigable);
if nav='FALSE' then
  set_item_property('P1',label,'Not Novigable');
else
  set_item_property('P1',label,'Novigable');
end if;
  ----------------------------------------------------------


end;
```

Visible/ enable/ navigable.



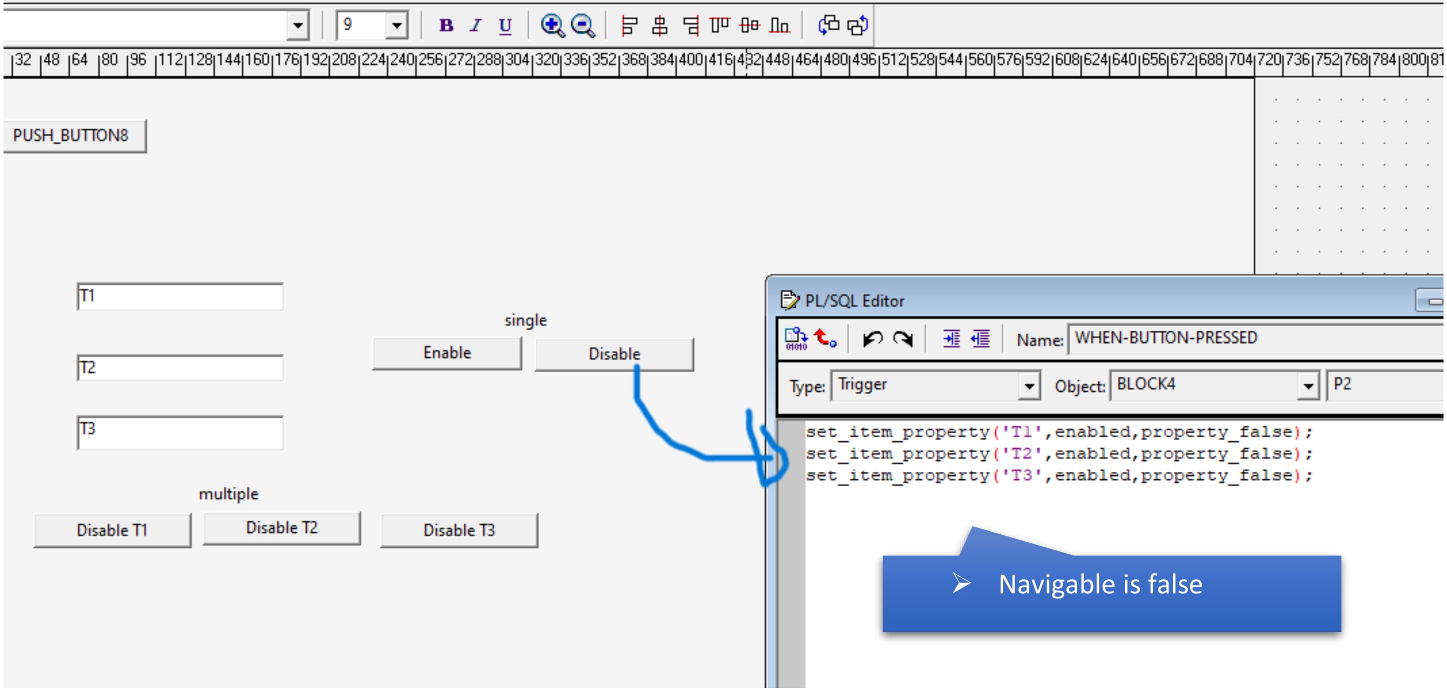
Automaticall

Visible = false

Enable=False

Navigable=False

not automatically



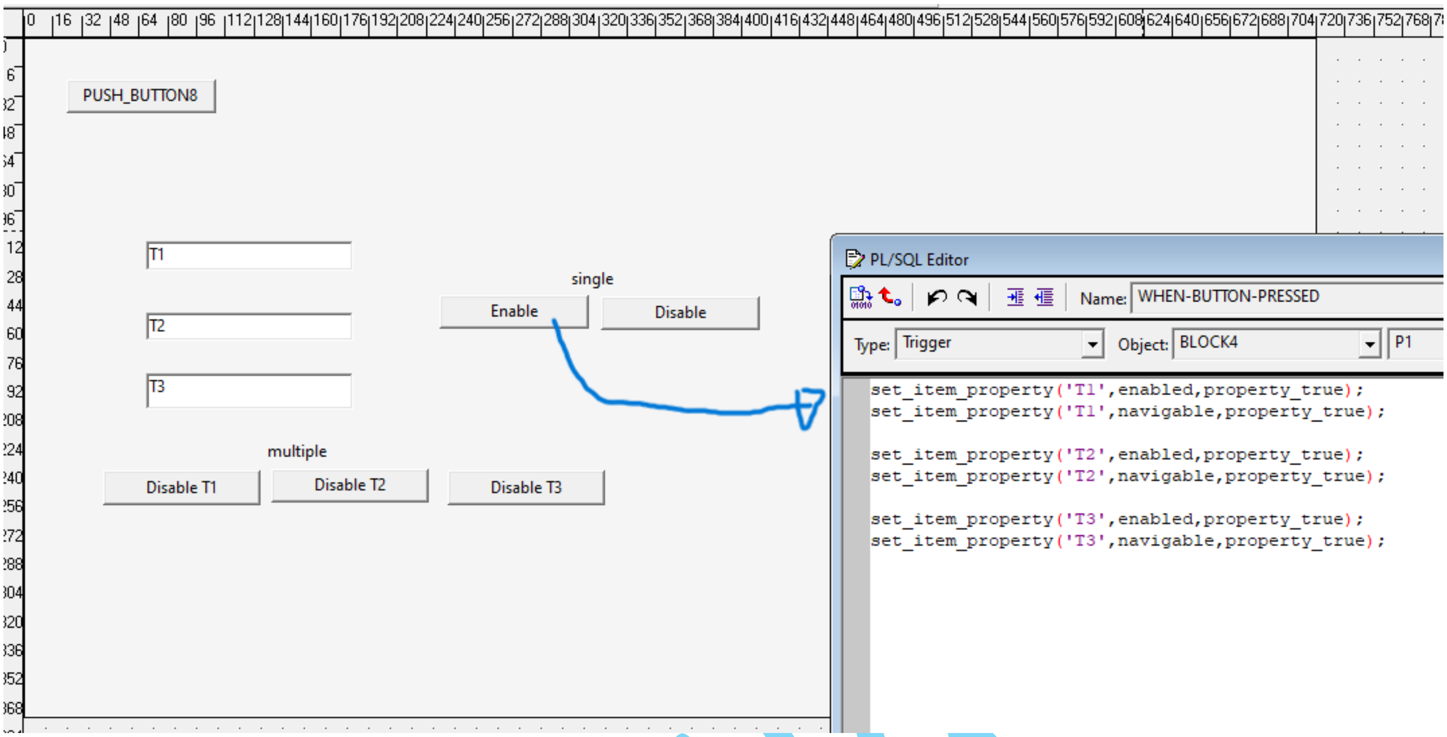
Name: WHEN-BUTTON-PRESSED

Type: Trigger Object: BLOCK4 P2

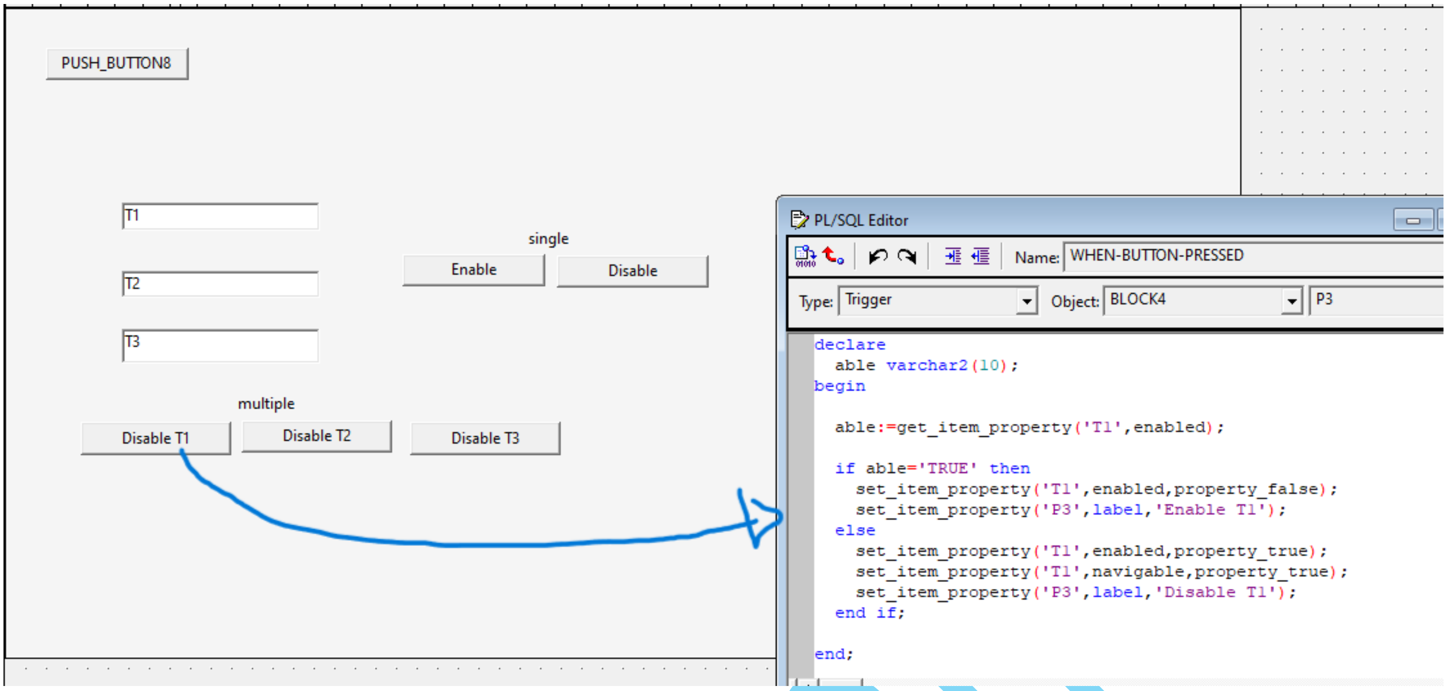
```
set_item_property('T1',enabled,property_false);
set_item_property('T2',enabled,property_false);
set_item_property('T3',enabled,property_false);
```

- Navigable is false

The Navigable must be modified



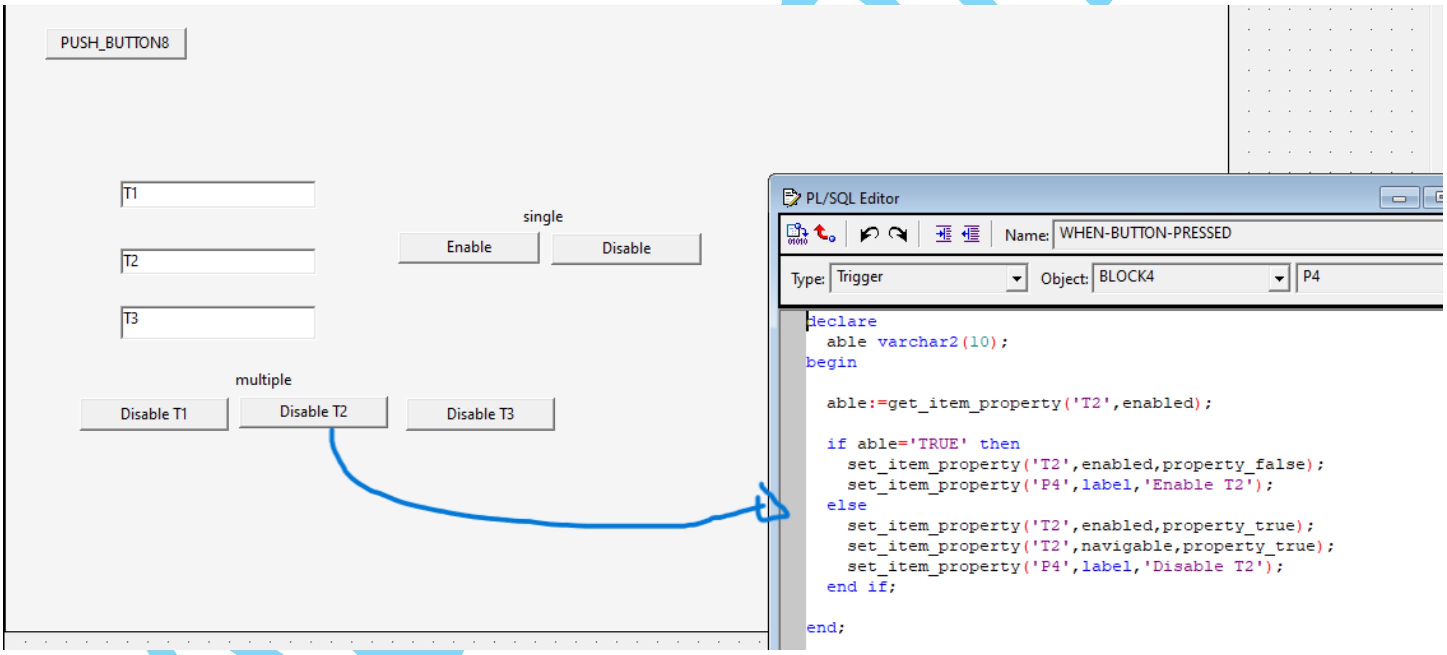
```
set_item_property('T1',enabled,property_true);
set_item_property('T1',navigable,property_true);

set_item_property('T2',enabled,property_true);
set_item_property('T2',navigable,property_true);

set_item_property('T3',enabled,property_true);
set_item_property('T3',navigable,property_true);
```



Name: WHEN-BUTTON-PRESSED

Type: Trigger Object: BLOCK4 P3

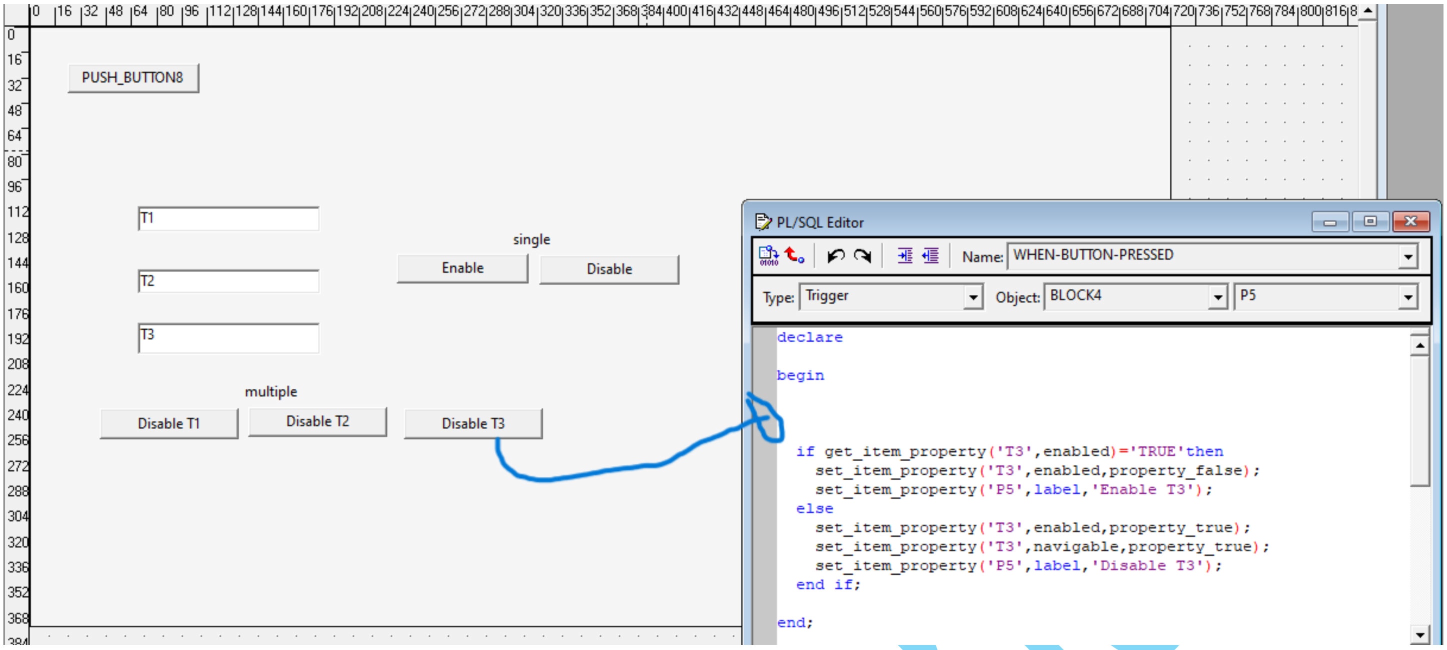
```
declare
  able varchar2(10);
begin

  able:=get_item_property('T1',enabled);

  if able='TRUE' then
    set_item_property('T1',enabled,property_false);
    set_item_property('P3',label,'Enable T1');
  else
    set_item_property('T1',enabled,property_true);
    set_item_property('T1',navigable,property_true);
    set_item_property('P3',label,'Disable T1');
  end if;

end;
```



Name: WHEN-BUTTON-PRESSED

Type: Trigger Object: BLOCK4 P4

```
declare
  able varchar2(10);
begin

  able:=get_item_property('T2',enabled);

  if able='TRUE' then
    set_item_property('T2',enabled,property_false);
    set_item_property('P4',label,'Enable T2');
  else
    set_item_property('T2',enabled,property_true);
    set_item_property('T2',navigable,property_true);
    set_item_property('P4',label,'Disable T2');
  end if;

end;
```



Name: WHEN-BUTTON-PRESSED

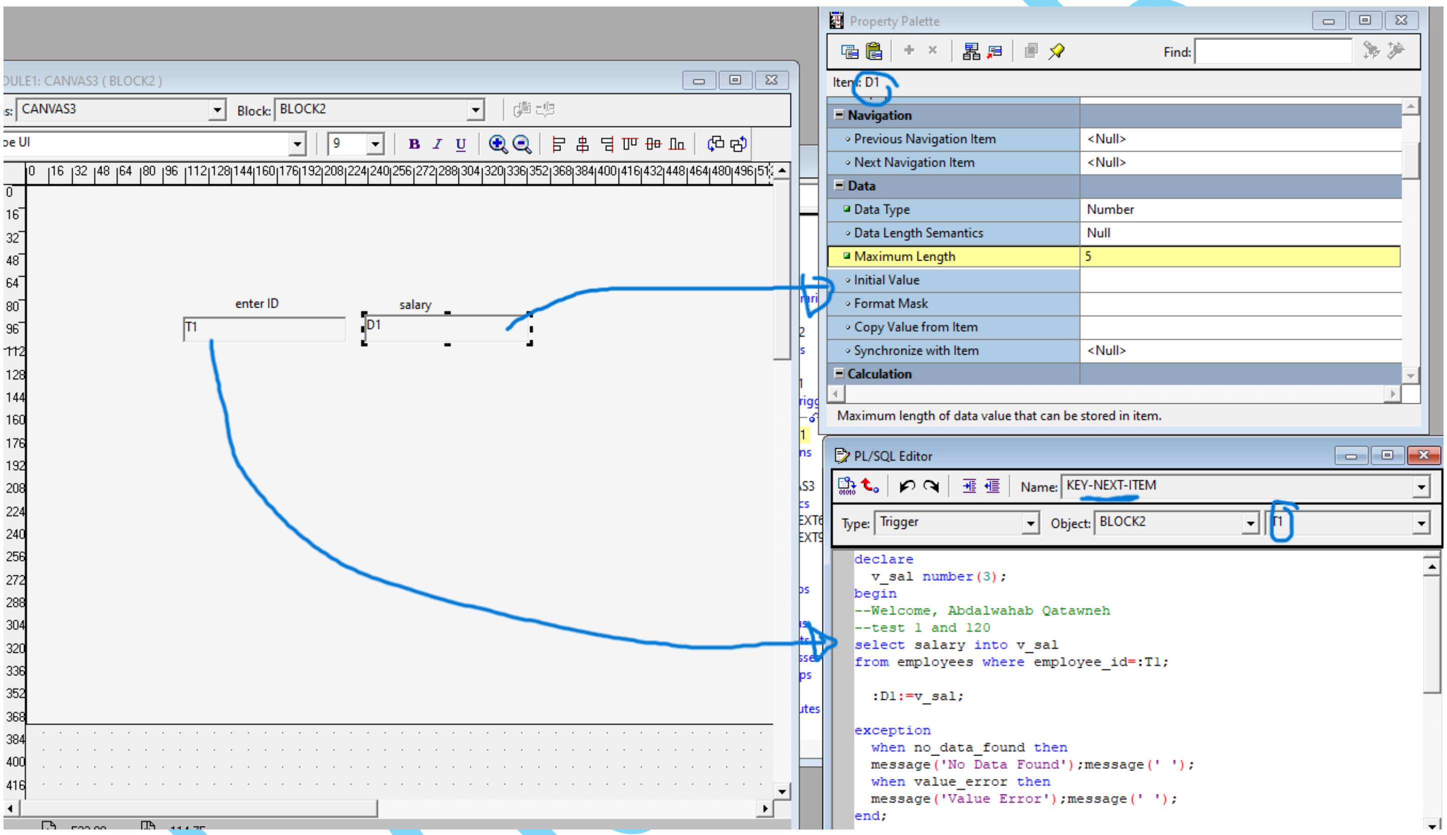
Type: Trigger Object: BLOCK4 P5

```
declare

begin


  if get_item_property('T3',enabled)='TRUE'then
    set_item_property('T3',enabled,property_false);
    set_item_property('P5',label,'Enable T3');
  else
    set_item_property('T3',enabled,property_true);
    set_item_property('T3',navigable,property_true);
    set_item_property('P5',label,'Disable T3');
  end if;

end;
```

File (Example Doctor)

Exception

1. No-data-found.
2. Value-error



Canvas: CANVAS3 Block: BLOCK2

Item: D1

Navigation	
Previous Navigation Item	<Null>
Next Navigation Item	<Null>
Data	
Data Type	Number
Data Length Semantics	Null
Maximum Length	5
Initial Value	
Format Mask	
Copy Value from Item	
Synchronize with Item	<Null>
Calculation	

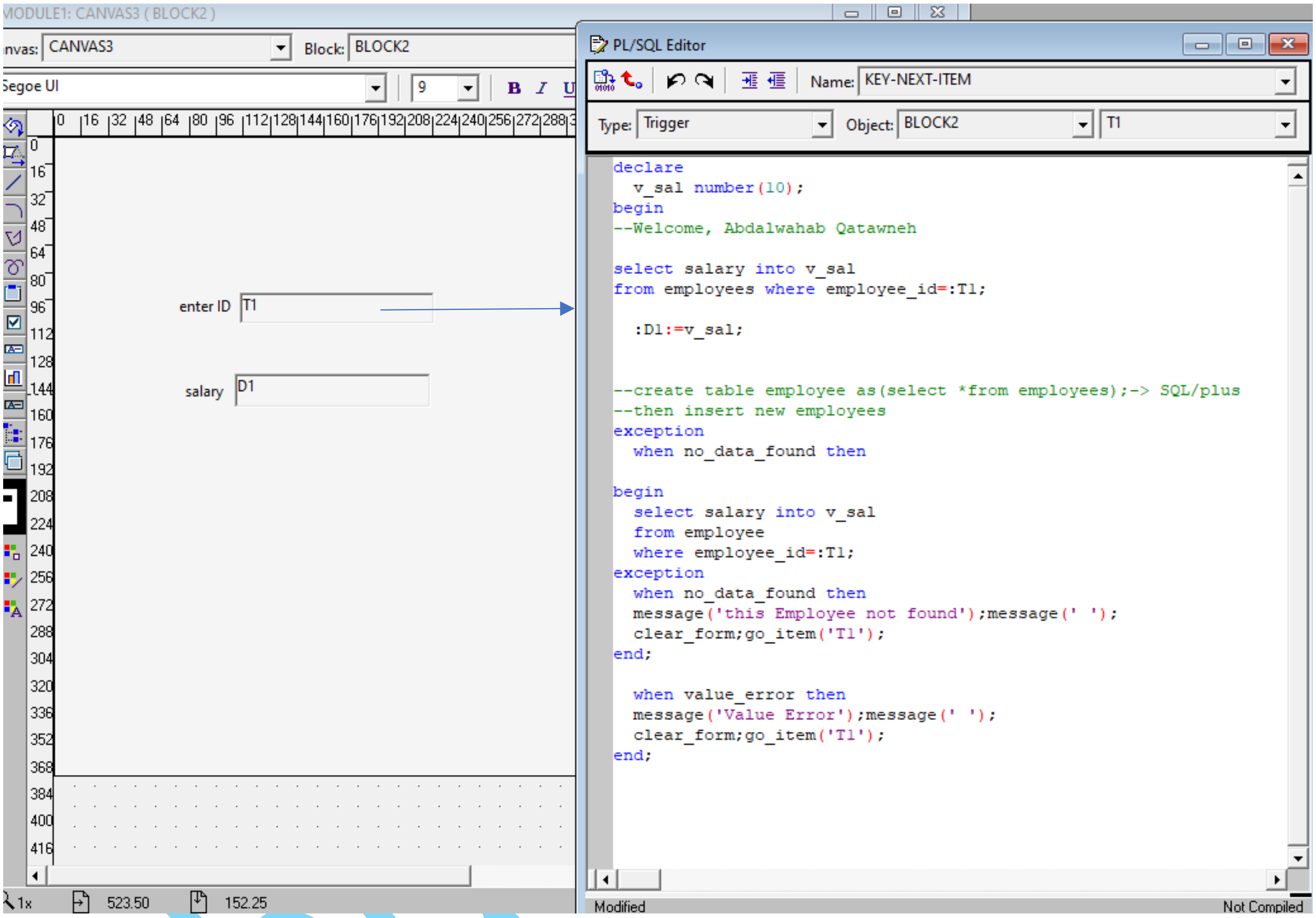
Maximum length of data value that can be stored in item.

Name: KEY-NEXT-ITEM

Type: Trigger Object: BLOCK2 T1

```
declare
  v_sal number(3);
begin
--Welcome, Abdalwahab Qatawneh
--test 1 and 120
select salary into v_sal
from employees where employee_id=:T1;

  :D1:=v_sal;

exception
  when no_data_found then
  message('No Data Found');message(' ');
  when value_error then
  message('Value Error');message(' ');
end;
```

Nested exception:



nvas: CANVAS3 Block: BLOCK2

enter ID T1

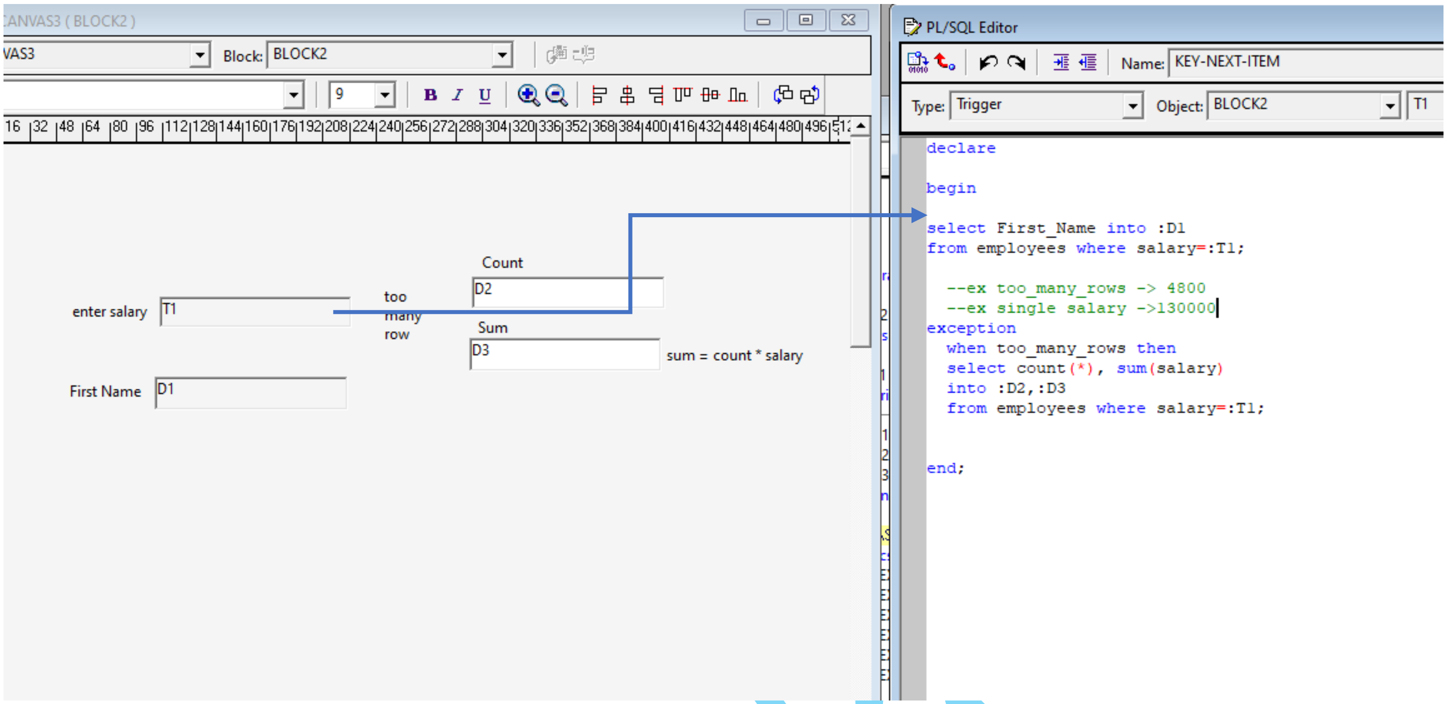
salary D1

Name: KEY-NEXT-ITEM

Type: Trigger Object: BLOCK2 T1

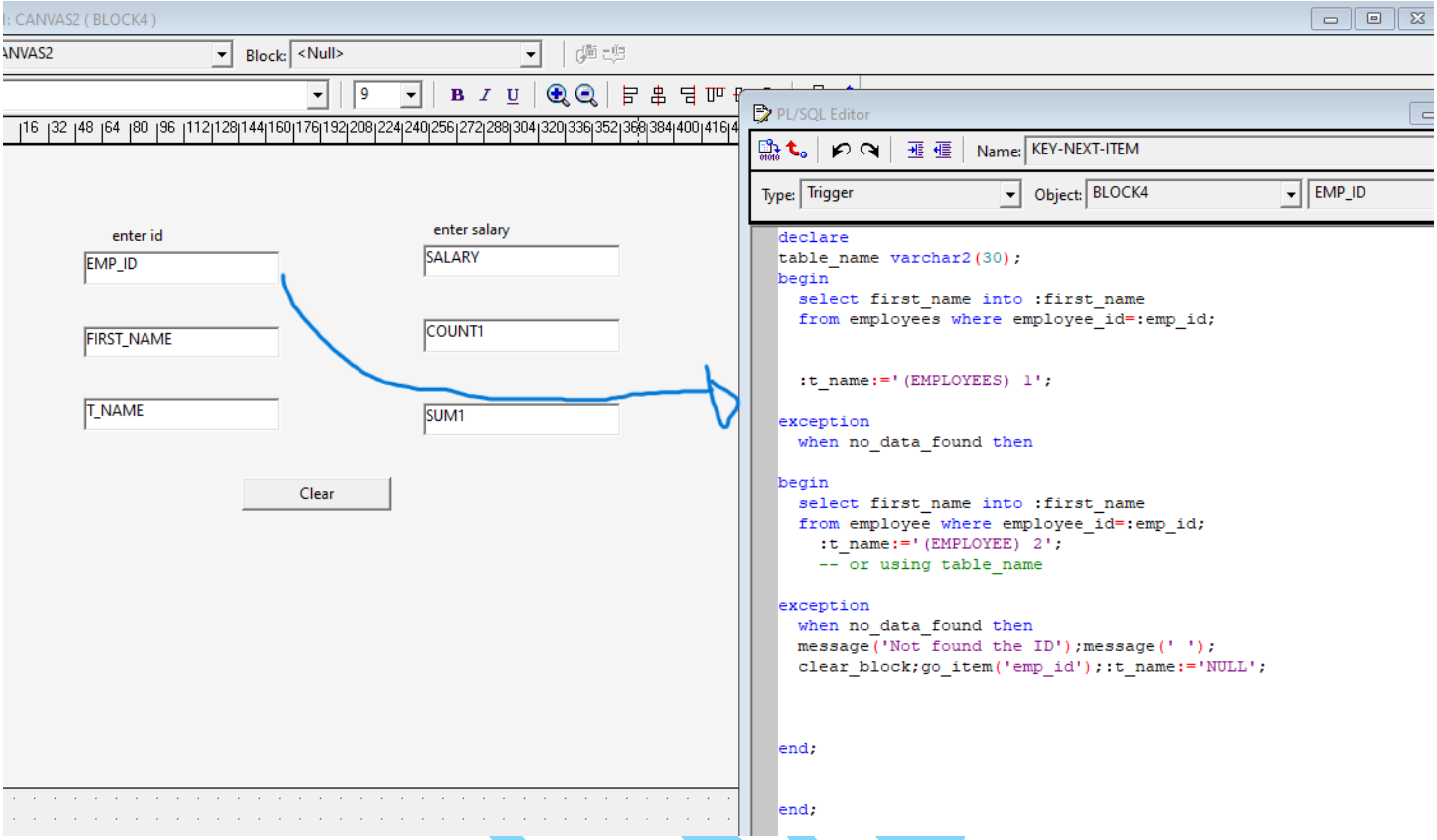
```
declare
  v_sal number(10);
begin
--Welcome, Abdalwahab Qatawneh

select salary into v_sal
from employees where employee_id=:T1;

  :D1:=v_sal;


--create table employee as(select *from employees);-> SQL/plus
--then insert new employees
exception
  when no_data_found then

begin
  select salary into v_sal
  from employee
  where employee_id=:T1;
exception
  when no_data_found then
  message('this Employee not found');message(' ');
  clear_form;go_item('T1');
end;

  when value_error then
  message('Value Error');message(' ');
  clear_form;go_item('T1');
end;
```

3. Too_many_rows



```
declare

begin

select First_Name into :D1
from employees where salary=:T1;

  --ex too_many_rows -> 4800
  --ex single salary ->130000
exception
  when too_many_rows then
  select count(*), sum(salary)
  into :D2,:D3
  from employees where salary=:T1;


end;
```

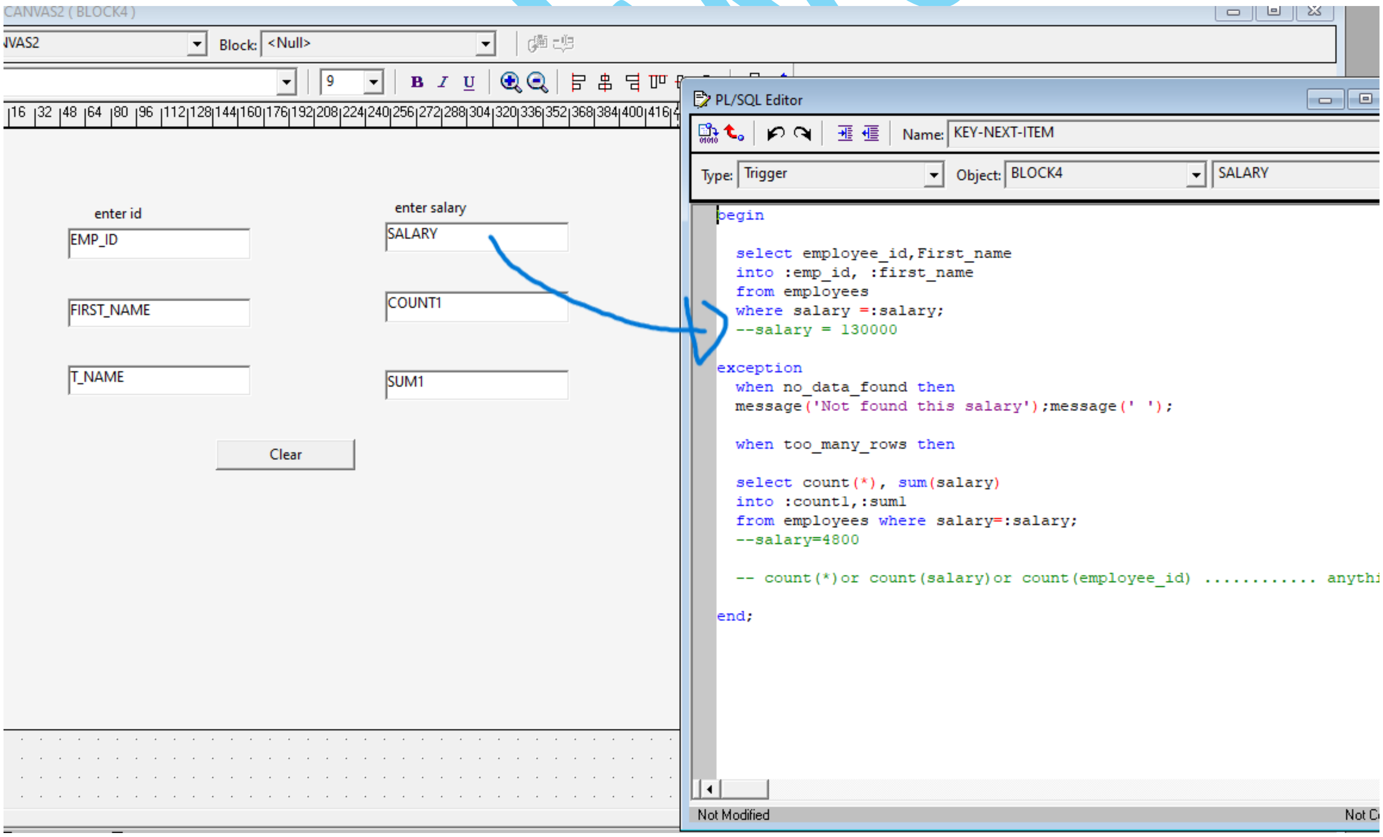
Multiple-select to single-select.



Name: KEY-NEXT-ITEM

Type: Trigger Object: BLOCK4 EMP_ID

```
declare
table_name varchar2(30);
begin
  select first_name into :first_name
  from employees where employee_id=:emp_id;


  :t_name:='(EMPLOYEES) 1';

exception
  when no_data_found then

begin
  select first_name into :first_name
  from employee where employee_id=:emp_id;
    :t_name:='(EMPLOYEE) 2';
    -- or using table_name

exception
  when no_data_found then
  message('Not found the ID');message(' ');
  clear_block;go_item('emp_id');:t_name:='NULL';



end;


end;
```



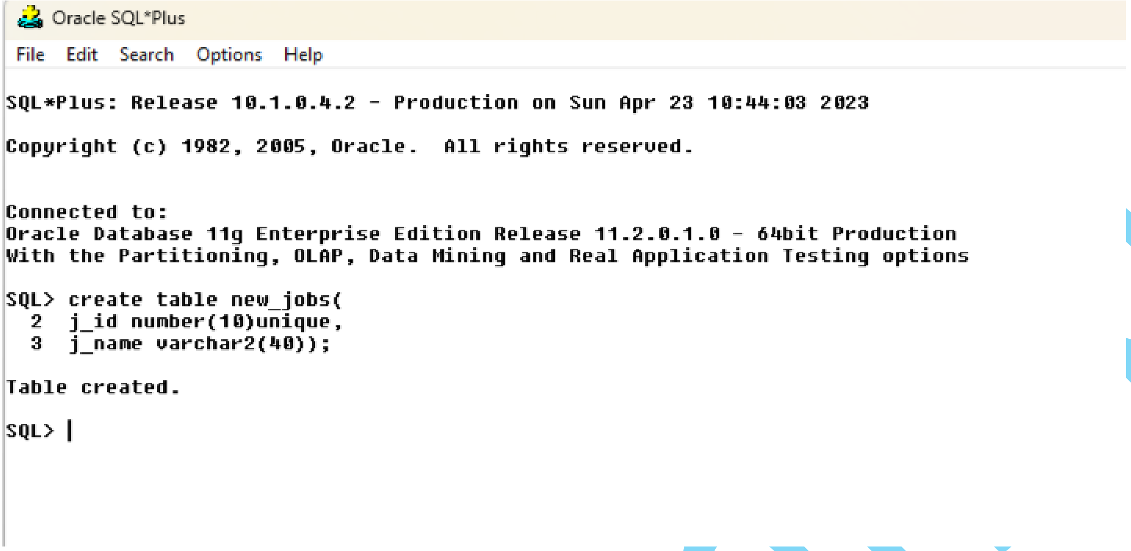
Name: KEY-NEXT-ITEM

Type: Trigger Object: BLOCK4 SALARY

```
begin

  select employee_id,First_name
  into :emp_id, :first_name
  from employees
  where salary =:salary;
  --salary = 130000

exception
  when no_data_found then
  message('Not found this salary');message(' ');

  when too_many_rows then

  select count(*), sum(salary)
  into :count1,:sum1
  from employees where salary=:salary;
  --salary=4800

  -- count(*)or count(salary)or count(employee_id) ............ anythi

end;
```

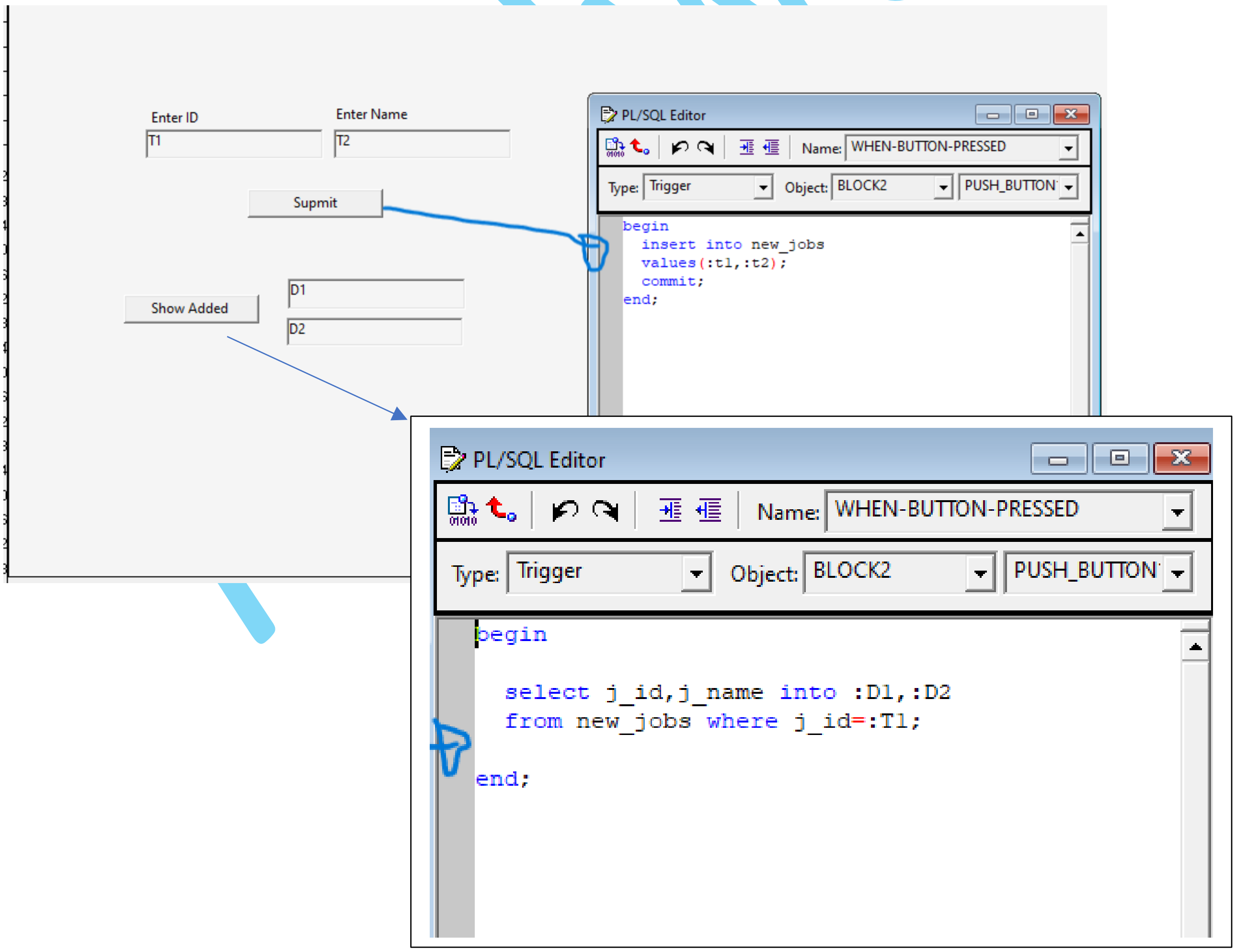
Insert into:

- Create a table.



```
SQL*Plus: Release 10.1.0.4.2 - Production on Sun Apr 23 10:44:03 2023

Copyright (c) 1982, 2005, Oracle.  All rights reserved.


Connected to:
Oracle Database 11g Enterprise Edition Release 11.2.0.1.0 - 64bit Production
With the Partitioning, OLAP, Data Mining and Real Application Testing options

SQL> create table new_jobs(
  2  j_id number(10)unique,
  3  j_name varchar2(40));

Table created.

SQL> |
```

- Insert



Name: WHEN-BUTTON-PRESSED

Type: Trigger

Object: BLOCK2 PUSH_BUTTON

```
begin
  insert into new_jobs
  values(:t1,:t2);
  commit;
end;
```

Name: WHEN-BUTTON-PRESSED

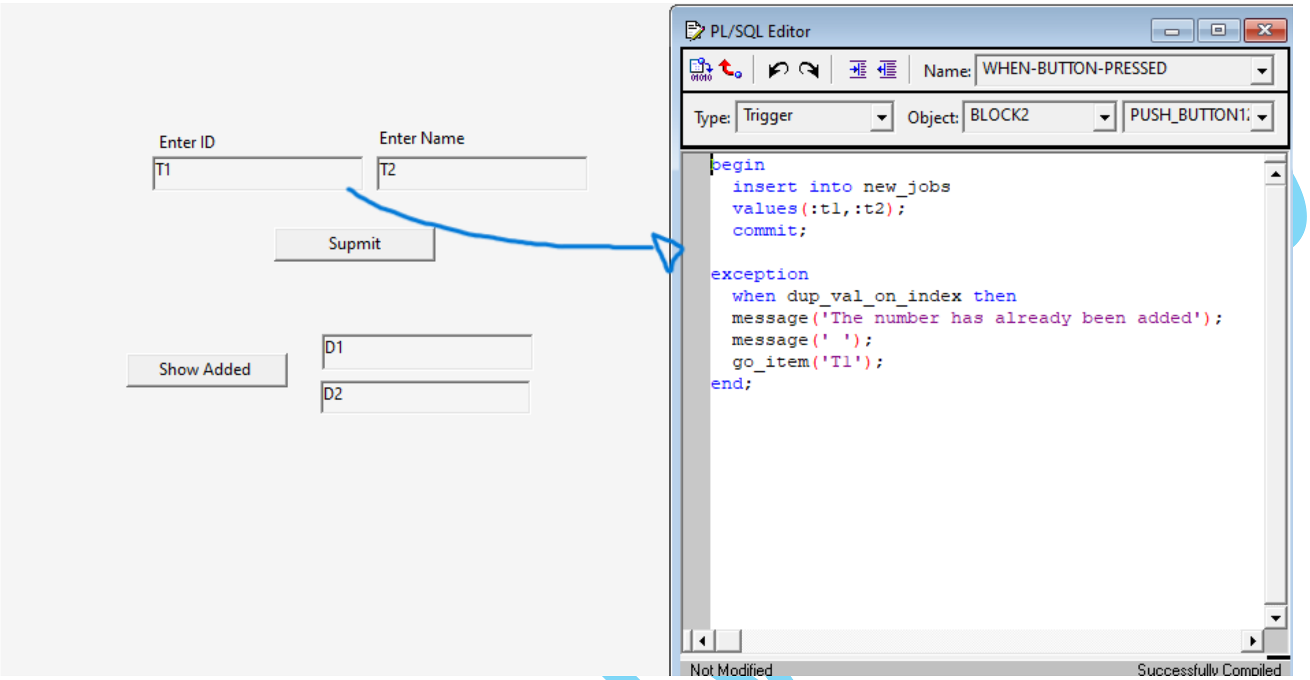
Type: Trigger

Object: BLOCK2 PUSH_BUTTON

```
begin

   select j_id,j_name into :D1,:D2
   from new_jobs where j_id=:T1;

end;
```

- Dup_val_on_index

- First Solution



Enter ID: T1

Enter Name: T2

D1

D2

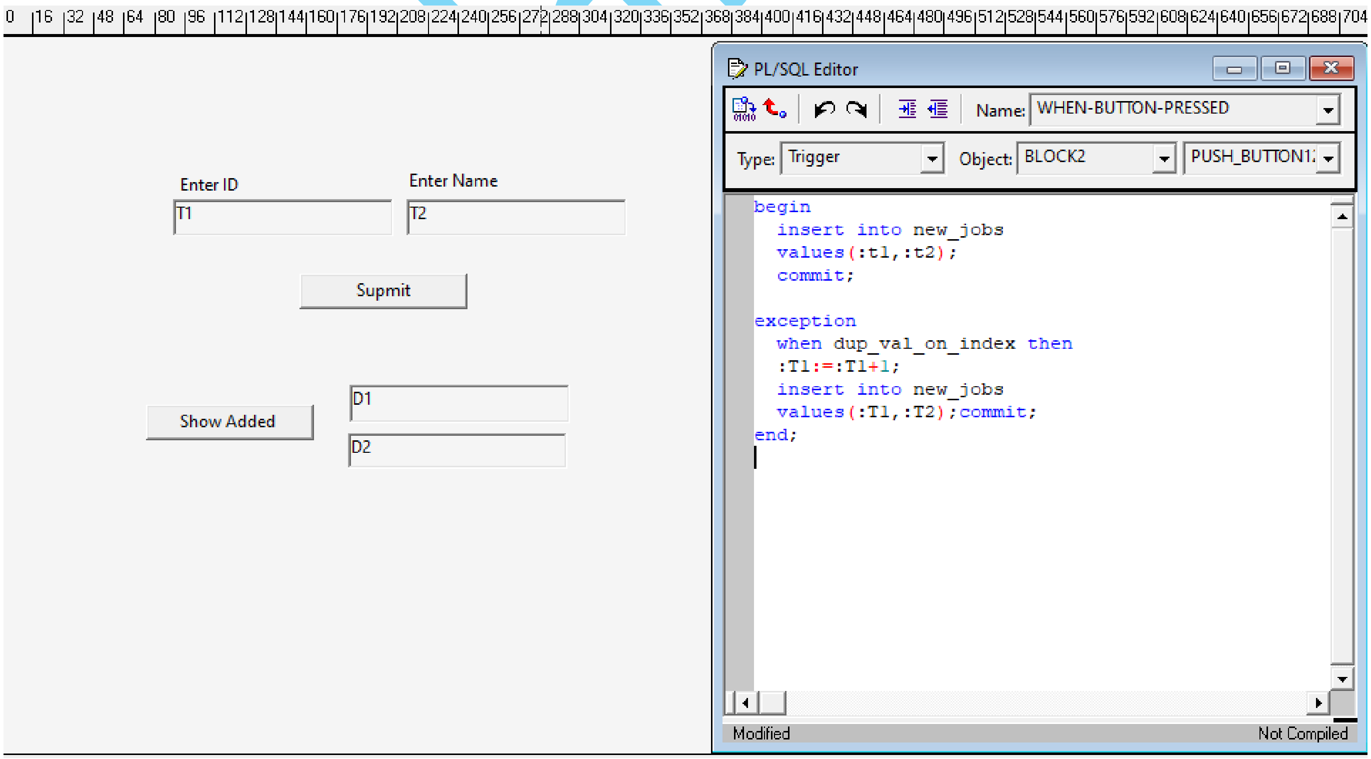
Name: WHEN-BUTTON-PRESSED

Type: Trigger Object: BLOCK2 PUSH_BUTTON1

```
begin
  insert into new_jobs
  values(:t1,:t2);
  commit;

exception
  when dup_val_on_index then
  message('The number has already been added');
  message(' ');
  go_item('T1');
end;
```

Not Modified Successfully Compiled

- Second Solution



Enter ID: T1

Enter Name: T2

D1

D2

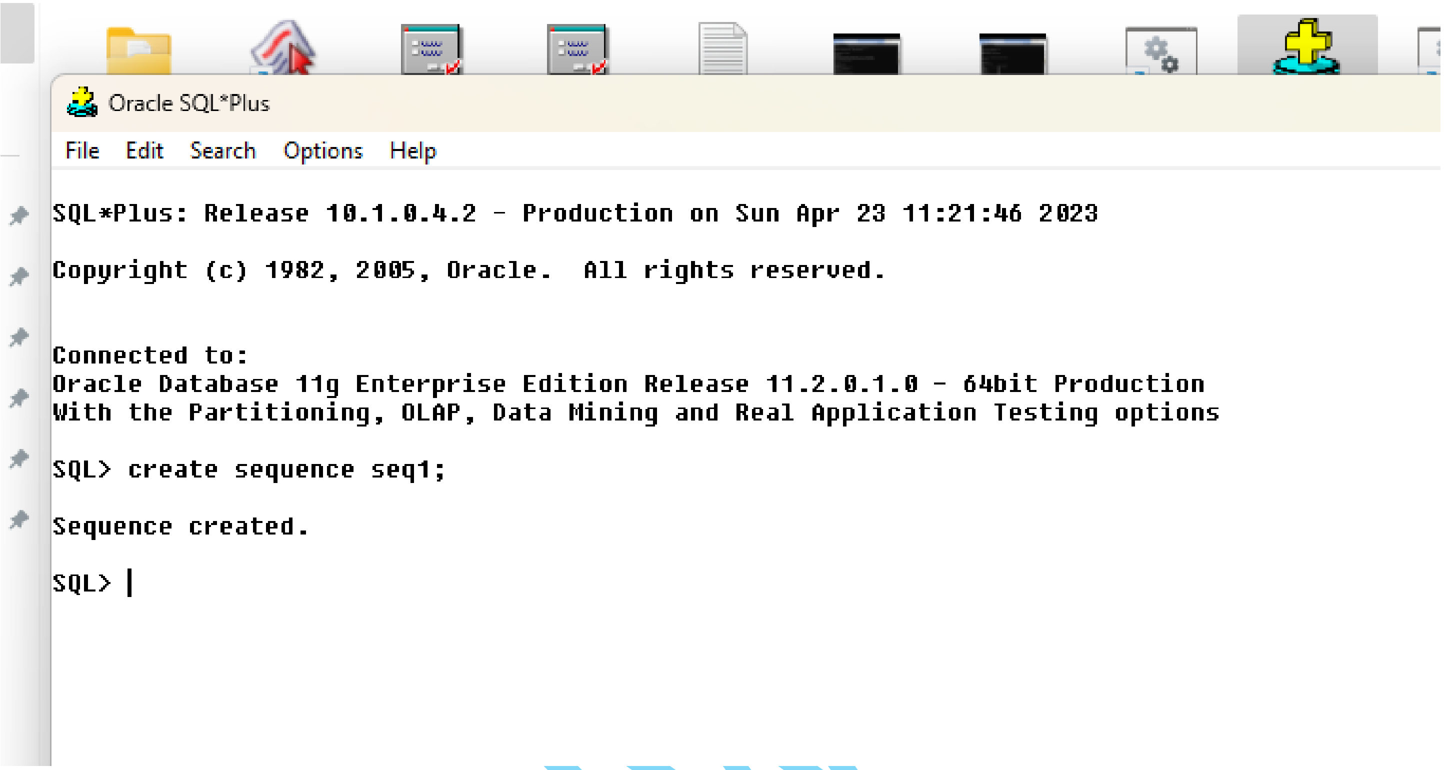
Name: WHEN-BUTTON-PRESSED

Type: Trigger Object: BLOCK2 PUSH_BUTTON1

```
begin
  insert into new_jobs
  values(:t1,:t2);
  commit;

exception
  when dup_val_on_index then
  :T1:=:T1+1;
  insert into new_jobs
  values(:T1,:T2);commit;
end;
```

Modified Not Compiled

- Third solution (using sequence)



```
SQL*Plus: Release 10.1.0.4.2 - Production on Sun Apr 23 11:21:46 2023

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Connected to:
Oracle Database 11g Enterprise Edition Release 11.2.0.1.0 - 64bit Production
With the Partitioning, OLAP, Data Mining and Real Application Testing options

SQL> create sequence seq1;

Sequence created.

SQL> |
```
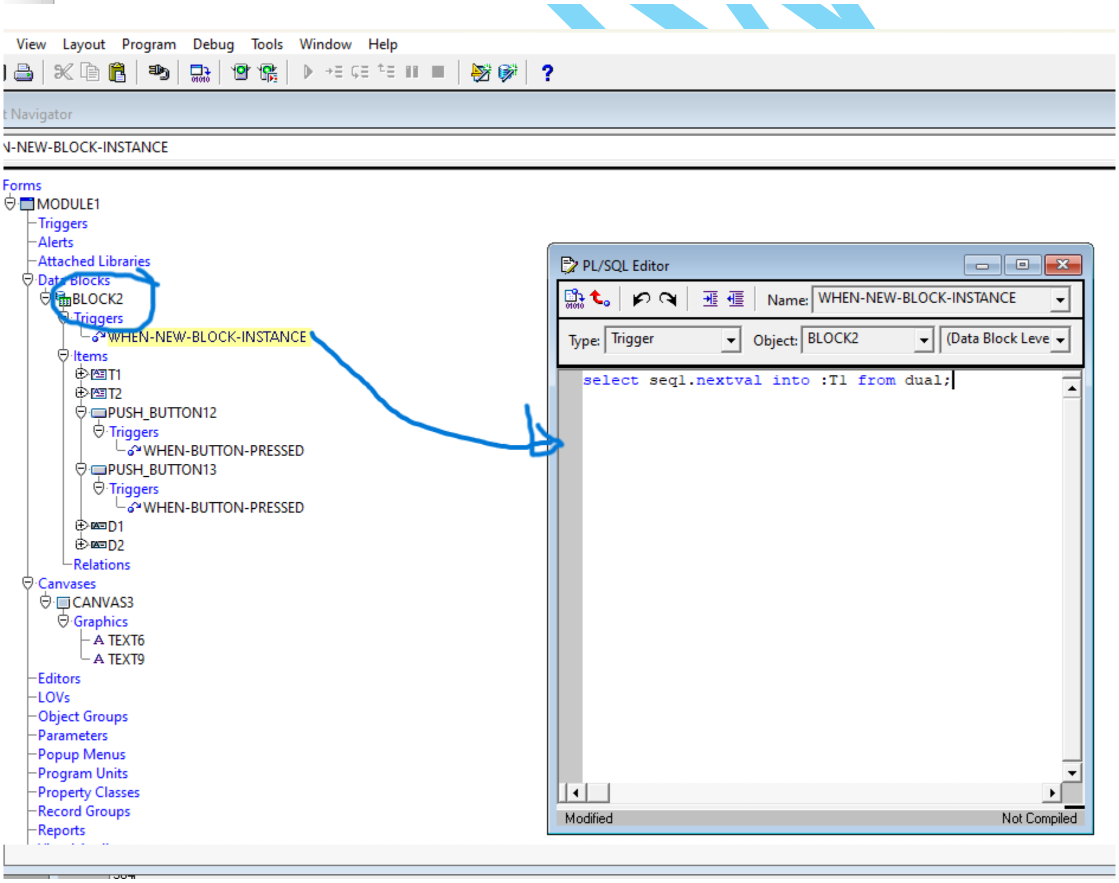
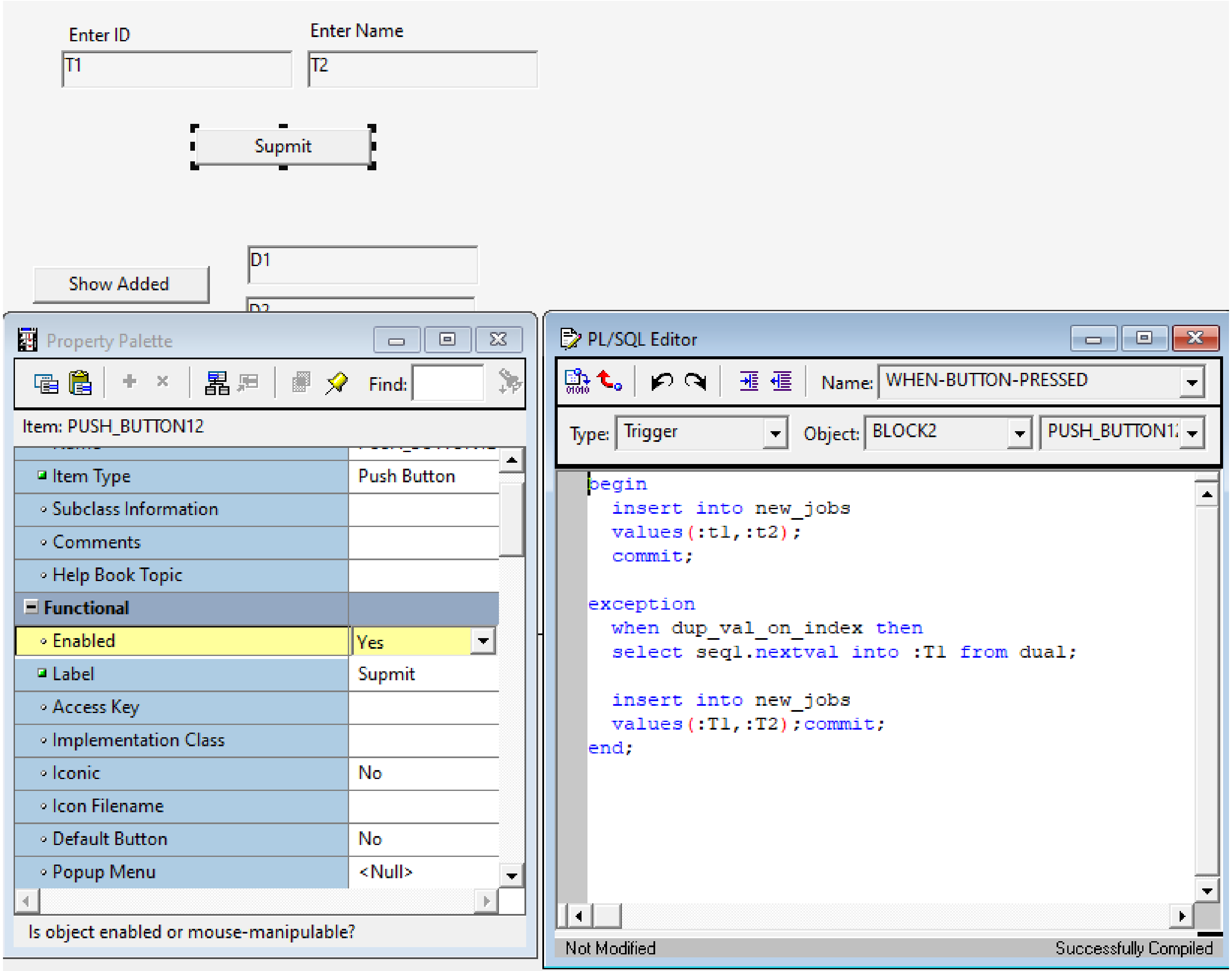



Name: WHEN-NEW-BLOCK-INSTANCE

Type: Trigger Object: BLOCK2 (Data Block Leve

```
select seq1.nextval into :T1 from dual;
```



Item: PUSH_BUTTON12

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

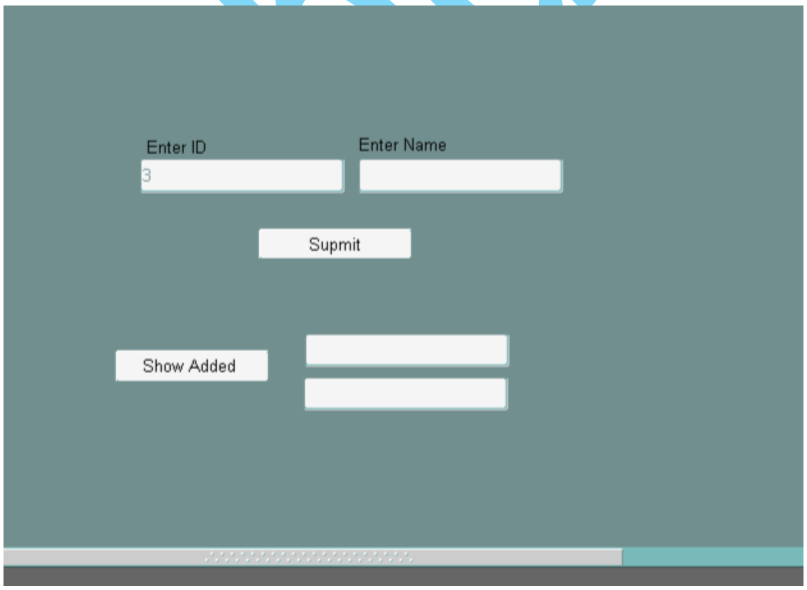
Is object enabled or mouse-manipulable?

Name: WHEN-BUTTON-PRESSED

Type: Trigger Object: BLOCK2 PUSH_BUTTON1:

```
begin
  insert into new_jobs
  values(:t1,:t2);
  commit;

exception
  when dup_val_on_index then
  select seq1.nextval into :T1 from dual;

  insert into new_jobs
  values(:T1,:T2);commit;
end;
```

Not Modified Successfully Compiled



Abdalwahab Mostafa Qatawneh