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BEFORE UPDATE Trigger

A BEFORE UPDATE Trigger means that Oracle will fire this trigger before the UPDATE operation is executed.

The syntax for an BEFORE UPDATE Trigger is:

```
CREATE or REPLACE TRIGGER trigger_name
BEFORE UPDATE
  ON table_name
  [ FOR EACH ROW ]
DECLARE
  -- variable declarations
BEGIN
  -- trigger code
EXCEPTION
  WHEN ...
  -- exception handling
END;
```

trigger_name is the name of the trigger to create.

Restrictions:

- You can not create a BEFORE trigger on a view.
- You can update the :NEW values.
- You can not update the :OLD values.

For example:

If you had a table created as follows:

```
CREATE TABLE orders
( order_id          number(5),
  quantity          number(4),
  cost_per_item     number(6,2),
  total_cost        number(8,2),
  updated_date      date,
  updated_by        varchar2(10)
);
```

We could then create a BEFORE UPDATE trigger as follows:

```
CREATE OR REPLACE TRIGGER orders_before_update
BEFORE UPDATE
  ON orders
  FOR EACH ROW

DECLARE
  v_username varchar2(10);

BEGIN

  -- Find username of person performing UPDATE on the table
  SELECT user INTO v_username
  FROM dual;

  -- Update updated_date field to current system date
  :new.updated_date := sysdate;

  -- Update updated_by field to the username of the person performing the UPDATE
  :new.updated_by := v_username;

END;
```