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Vocabulary

Identify the vocabulary word for each definition below:

Explicit Conversions	Converts values from one data type to another by using built-in functions.
Implicit Conversions	Converts data types dynamically if they are mixed in a statement.

Try It / Solve It

1. Examine the following code and then answer the questions.

```
DECLARE
  x VARCHAR2(20);
BEGIN
  x := '123' + '456' ;
  DBMS_OUTPUT.PUT_LINE(x);
END;
```

- A. What do you think the output will be when you run the above code?

Answer : 123456

- B. Now, run the code. What is the output?

Answer : 579

- C. In your own words, describe what happened when you ran the code. Did any implicit conversions take place?

Answer : Yes, implicit conversion took place, because conversion that is applied by the compiler.

2. Write an anonymous PL/SQL block that assigns the programmer's full name to a variable, and then displays the number of characters in the name.

Answer :

```
declare
  v_name varchar2(30) := 'Afina Putri Dayanti';
begin
  dbms_output.put_line('total characters of my name is : ' || length(v_name));
end;
```

3. Write an anonymous PL/SQL block that uses today's date and outputs it in the format of 'Month dd, yyyy'. Store the date in a DATE variable called my_date. Create another variable of the DATE type called v_last_day. Assign the last day of this month to v_last_day. Display the value of v_last_day.

Answer :

```
declare
    my_date DATE := SYSDATE;
    v_last_date DATE;
begin
    v_last_date := last_day(my_date);
    dbms_output.put_line('today : ' || to_char(my_date, 'Month dd, yyyy'));
    dbms_output.put_line('the last day of this month : ' || v_last_date);
end;
```

4. Modify the program created in question 3 to add 45 days to today's date and then calculate and display the number of months between the two dates.

Answer :

```
declare
    my_date date := SYSDATE;
    v_new_date date;
    v_months number;
begin
    v_new_date := my_date + 45;
    v_months := months_between(v_new_date, my_date);
    dbms_output.put_line('today : ' || to_char(my_date, 'Month dd, yyyy'));
    dbms_output.put_line('number of months between the two dates : ' || v_months);
end;
```

5. Examine the following code and then answer the questions.

```
DECLARE
    x    NUMBER(6);
BEGIN
    x := 5 + 3 * 2;
    DBMS_OUTPUT.PUT_LINE(x);
END;
```

- A. What do you think the output will be when you run the above code?

Answer : 11

- B. Now run the code. What is the output?

Answer : 11

- C. In your own words, explain the results.

Answer : Expression multiplication has a higher precedence than addition

6. Examine the following code and then answer the question.

```
DECLARE
```

```
  v_number    NUMBER;
```

```
  v_boolean   BOOLEAN;
```

```
BEGIN
```

```
  v_number := 25;
```

```
  v_boolean := NOT(v_number > 30);
```

```
END;
```

What value is assigned to v_boolean?

Answer : TRUE

7. List two drawbacks to relying on implicit data type conversions

Answer :

- At first glance, implicit conversions might seem useful; however, there are several drawbacks: • Implicit conversions can be slower.
- When you use implicit conversions, you lose control over your program because you are making an assumption about how Oracle handles the data.
- If Oracle changes the conversion rules, then your code can be affected.
- Code that uses implicit conversion is harder to read and understand.

