

Section 4:

IF Statements:

```
1  DECLARE
2  region_id NUMBER:= 91;
3  BEGIN
4  if region_id in (5,13,21) then
5      dbms_output.put_line('America');
6  elsif region_id in (11,14,15) then
7      dbms_output.put_line('Africa');
8  elsif region_id in (30,34,35) then
9      dbms_output.put_line('Asia');
10 else
11     dbms_output.put_line('UNknown region');
12 end if
13 end;
```

UNknown region

Case statement:

```
1 DECLARE
2   region_id NUMBER:= 91;
3 BEGIN
4   case
5     when region_id in (5,13,21) then
6       dbms_output.put_line('America');
7     when region_id in (11,14,15) then
8       dbms_output.put_line('Africa');
9     when region_id in (30,34,35) then
10      dbms_output.put_line('Asia');
11    else
12      dbms_output.put_line('Unknown region');
13    end case;
14 end;
```

Unknown region

LOOP:

```
1 BEGIN
2   for counter IN 1..5 loop
3     dbms_output.put_line(counter);
4   end loop;
5 end;
```

1
2
3
4
5

Simple if condition:

```
1  DECLARE
2  age number:=31;
3  begin
4  if age>18 then
5  dbms_output.put_line('U can be arrested');
6  end if;
7  end;
```

U can be arrested

Simple if else condition:

```
1  DECLARE
2  age number:=17;
3  begin
4  if age>18 then
5  dbms_output.put_line('U can be arrested');
6  else
7  dbms_output.put_line('get urself in juvinile lollllll');
8  end if;
9  end;
```

```
DECLARE age number:=17; begin if age>18 then dbms_output.put_line('U can be arrested'); else
dbms_output.put_line('get urself in juvinile lollllll'); end if; end;
```

```
get urself in juvinile lollllll
```

If statement with multiple expressions:

```
1 DECLARE
2   age number:=17;
3   name varchar2(100):='Uday'
4   begin
5   if age>18 and name = 'Uday' then
6   dbms_output.put_line(name||' is a major');
7   else
8   dbms_output.put_line(name||' is a minor');
9   end if;
10  end;
```

Uday is a major

Null values in If statements:

```
1 DECLARE
2   age number;
3   begin
4   if age>18 then
5   dbms_output.put_line('U are a major');
6   else
7   dbms_output.put_line('U are a minor');
8   end if;
9   end;
```

```
DECLARE age number; begin if age>18 then dbms_output.put_line('U are a major'); else
dbms_output.put_line('U are a minor'); end if; end;
```

U are a minor

Handlings nulls:

```
1  DECLARE
2  age number:= NULL;
3  age2 number:=NULL;
4  begin
5  if age=age2 then
6  dbms_output.put_line('Both are equal');
7  else
8  dbms_output.put_line('Not equal');
9  end if;
10 end;
```

```
equal'); else dbms_output
Not equal
Statement processed 0.01 seconds
```

4.2:

Searched case statements:

```
1  DECLARE
2  v_num NUMBER := 15;
3  v_txt VARCHAR2(50);
4  BEGIN
5  IF v_num > 20 THEN
6  v_txt := 'greater than 20';
7  ELSIF v_num > 15 THEN
8  | v_txt := 'greater than 15';
9  ELSE
10 v_txt := 'less than 16';
11 END IF;
12 DBMS_OUTPUT.PUT_LINE(v_txt);
13 END;
14
```

less than 16

Case expression grade example:

```
1 DECLARE
2 v_grade CHAR(1) := 'A';
3 v_appraisal VARCHAR2(20);
4 BEGIN
5 v_appraisal :=
6 CASE v_grade
7 WHEN 'A' THEN 'Excellent'
8 WHEN 'B' THEN 'Very Good'
9 WHEN 'C' THEN 'Good'
10 ELSE 'No such grade'
11 END;
12 DBMS_OUTPUT.PUT_LINE('Grade: ' || v_grade ||
13 ' Appraisal: ' || v_appraisal);
14 END;
15
```

Grade: A Appraisal: Excellent

4.3:

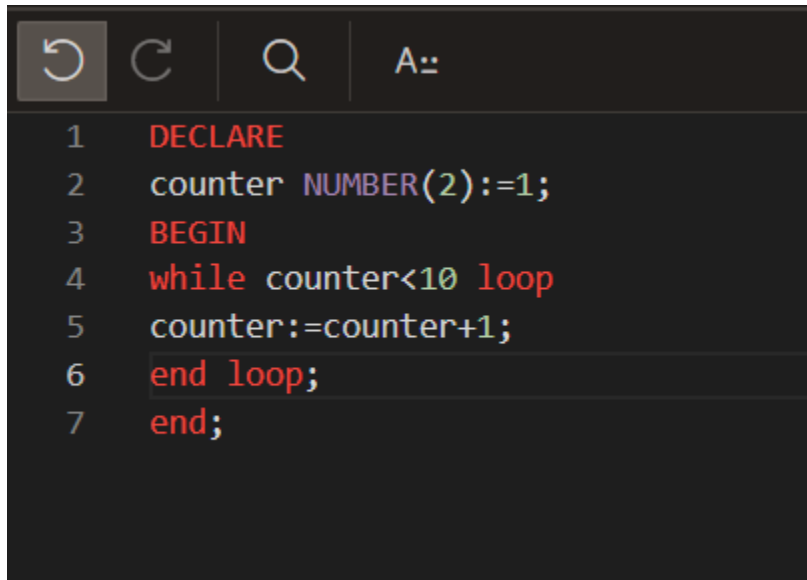
Basic loop expression:

```
↶ ↷ 🔍 A::  
1 DECLARE  
2 counter NUMBER(2):=1;  
3 BEGIN  
4 LOOP  
5 dbms_output.put_line(counter);  
6 counter:=counter+1;  
7 exit when counter>10;  
8 end loop;  
9 end;
```

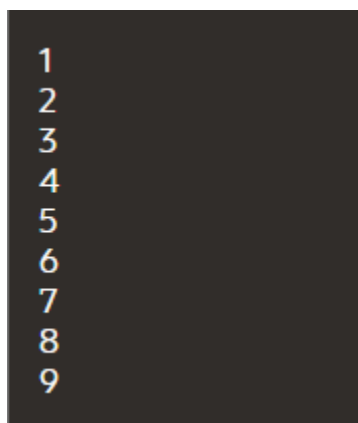
```
1  
2  
3  
4  
5  
6  
7  
8  
9  
10
```


4.4:

While loop:



```
1  DECLARE
2  counter NUMBER(2):=1;
3  BEGIN
4  while counter<10 loop
5  counter:=counter+1;
6  end loop;
7  end;
```



```
1
2
3
4
5
6
7
8
9
```

For loop expression:

```
1 DECLARE
2 counter NUMBER:=1;
3 counter_end number:=10;
4 BEGIN
5 for i in counter..counter_end loop
6 dbms_output.put_line(counter);
7 end loop;
8 end;
```

```
1
1
1
1
1
1
1
1
1
1
1
```

4.5:

Nested loop:

```
1 BEGIN
2 FOR v_outerloop IN 1..3 LOOP
3 FOR v_innerloop IN REVERSE 1..5 LOOP
4 DBMS_OUTPUT.PUT_LINE('Outer loop is: ' ||
5 v_outerloop ||
6 ' and inner loop is: ' ||
7 v_innerloop);
8 END LOOP;
9 END LOOP;
10 END;
```

Outer loop is: 1 and inner loop is: 5
Outer loop is: 1 and inner loop is: 4
Outer loop is: 1 and inner loop is: 3
Outer loop is: 1 and inner loop is: 2
Outer loop is: 1 and inner loop is: 1
Outer loop is: 2 and inner loop is: 5
Outer loop is: 2 and inner loop is: 4
Outer loop is: 2 and inner loop is: 3
Outer loop is: 2 and inner loop is: 2
Outer loop is: 2 and inner loop is: 1
Outer loop is: 3 and inner loop is: 5
Outer loop is: 3 and inner loop is: 4
Outer loop is: 3 and inner loop is: 3
Outer loop is: 3 and inner loop is: 2
Outer loop is: 3 and inner loop is: 1

Loop lables:

```
1 DECLARE
2 v_outerloop PLS_INTEGER := 0;
3 v_innerloop PLS_INTEGER := 5;
4 BEGIN
5 <<outer_loop>>
6 LOOP
7 v_outerloop := v_outerloop + 1;
8 v_innerloop := 5;
9 EXIT WHEN v_outerloop > 3;
10 <<inner_loop>>
11 LOOP
12 DBMS_OUTPUT.PUT_LINE('Outer loop is: ' || v_outerloop ||
13 ' and inner loop is: ' || v_innerloop);
14 v_innerloop := v_innerloop - 1;
15 EXIT WHEN v_innerloop = 0;
16 END LOOP inner_loop;
17 END LOOP outer_loop;
18 END;
```

Outer loop is: 1 and inner loop is: 5
Outer loop is: 1 and inner loop is: 4
Outer loop is: 1 and inner loop is: 3
Outer loop is: 1 and inner loop is: 2
Outer loop is: 1 and inner loop is: 1
Outer loop is: 2 and inner loop is: 5
Outer loop is: 2 and inner loop is: 4
Outer loop is: 2 and inner loop is: 3
Outer loop is: 2 and inner loop is: 2
Outer loop is: 2 and inner loop is: 1
Outer loop is: 3 and inner loop is: 5
Outer loop is: 3 and inner loop is: 4
Outer loop is: 3 and inner loop is: 3
Outer loop is: 3 and inner loop is: 2
Outer loop is: 3 and inner loop is: 1

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