

-- 9i / 10g

```
SQL> create table radiohead (id number, code varchar2(5), name varchar2(20));
```

Table created.

```
SQL> begin
 2 for i in 1..10000 loop
 3   insert into radiohead values(1, 'AAA', 'Description A');
 4   insert into radiohead values(2, 'BBB', 'Description B');
 5   insert into radiohead values(3, 'CCC', 'Description C');
 6   insert into radiohead values(4, 'DDD', 'Description D');
 7   insert into radiohead values(5, 'EEE', 'Description E');
 8   insert into radiohead values(6, 'FFF', 'Description F');
 9   insert into radiohead values(7, 'GGG', 'Description G');
10   insert into radiohead values(8, 'HHH', 'Description H');
11   insert into radiohead values(9, 'III', 'Description I');
12   insert into radiohead values(10, 'JJJ', 'Description J');
13 end loop;
14 commit;
15 end;
16 /
```

PL/SQL procedure successfully completed.

-- Note this table only has 10 different combinations of values for columns ID and CODE ...

```
SQL> create index radiohead_idx on radiohead(id, code);
```

Index created.

```
SQL> exec dbms_stats.gather_table_stats(ownname=>null, tabname=>'RADIOHEAD',
estimate_percent=>null, cascade=>true, method_opt=>'FOR ALL COLUMNS SIZE 1');
```

PL/SQL procedure successfully completed.

```
SQL> set autotrace traceonly
```

```
SQL> select * from radiohead where id = 2 and code = 'BBB';
```

10000 rows selected.

Execution Plan

Plan hash value: 2516349655

Id	Operation	Name	Rows	Bytes	Cost (%CPU)	Time
0	SELECT STATEMENT		1000	21000	42 (10)	00:00:01
* 1	TABLE ACCESS FULL	RADIOHEAD	1000	21000	42 (10)	00:00:01

Predicate Information (identified by operation id):

1 - filter("ID"=2 AND "CODE"='BBB')

Statistics

```
-----
      1 recursive calls
      0 db block gets
     365 consistent gets
      0 physical reads
      0 redo size
   50684 bytes sent via SQL*Net to client
     407 bytes received via SQL*Net from client
      3 SQL*Net roundtrips to/from client
      0 sorts (memory)
      0 sorts (disk)
   10000 rows processed
```

-- Although 10000 rows are actually selected, Oracle is incorrectly assuming that 10% x 10% = 1% of data is to be selected.
-- 1% of the 100,000 rows is 1000 rows ...