```sql
1    /* Question 2.3 and Question 2.4 */
2    /* Package header */
3    create or replace package search_tuples as
4        /* Search_TA  takes classid as Input and sends message as OUT parameter if any
         exception has occured or condition not satisfied*/
5        /* cursor has been taken as OUT parameter to get the data if all conditions met and
         result is successful*/
6        PROCEDURE search_TA( class_id in classes.classid%type, message OUT varchar2,
         cur_ClassTA OUT sys_refcursor);
7
8        /* search_prerequisites_course  takes dept code and course number as Input and
         sends message if any exception has occured or condition not satisfied*/
9        /* cursor has been implemented to get the data if all conditions met and result is
         successful*/
10       procedure search_prerequisites_course(dept_code_pre in
         prerequisites.dept_code%type, course#_pre in prerequisites.course#%type,
         pre_req_cursor out sys_refcursor, message out varchar2 );
11
12   end;
13   /
14   show errors
15
16   /* Body for package search_tuples */
17   create or replace package body search_tuples as
18
19       procedure search_prerequisites_course(dept_code_pre in
         prerequisites.dept_code%type, course#_pre in prerequisites.course#%type,
         pre_req_cursor out sys_refcursor, message out varchar2 )
20       as
21       valid_count number;
22       begin
23       select count(*) into valid_count from prerequisites where
         dept_code||course#=dept_code_pre||course#_pre;
24       if valid_count=0
25       then
26       message:='The combination you entered '||dept_code_pre||course#_pre||' does not
         exists';
27       else
28       open pre_req_cursor for
29           select pre_dept_code, pre_course# from prerequisites
30           start with dept_code = dept_code_pre and course# = course#_pre
31           connect by dept_code = prior pre_dept_code and course# = prior pre_course#
32           ;
33           message:='Data has been successfully retrieved';
34       end if;
35       end search_prerequisites_course;
36
37       procedure search_TA( class_id in classes.classid%type ,message out varchar2
         ,cur_ClassTA out sys_refcursor)
38       is
39       check_class number;
40       check_ta number;
41       begin
42           select count(classid) into check_class from classes where classid = class_id;
43
44           select count(s.first_name) into check_ta
45           from students s join classes c on c.ta_B# = s.B#
46           where c.classid = class_id;
47
48           if check_class = 0
49               then message := 'The class is invalid.';
50           else
51               if check_ta = 0
52                   then message := 'The class has no TA.';
53               else
54                   open cur_ClassTA for
55                   select s.B#, s.first_name, s.last_name from students s  join classes c
                   on c.ta_B# = s.B#
56                   where c.classid = class_id;
```

```
            end if;
         end if;
      end search_TA;


   end search_tuples;
/
show errors
```