EXPERIMENT 1.2

```sql
-- Define type for Exams
CREATE TYPE Exam_Type AS OBJECT (
    year NUMBER(4),
    city VARCHAR2(30)
);


-- Define a Nested Table type for ExamSet
CREATE TYPE ExamSet_Type AS TABLE OF Exam_Type;


-- Define type for Skills
CREATE TYPE Skill_Type AS OBJECT (
    type VARCHAR2(30),
    ExamSet ExamSet_Type
);


-- Define a Nested Table type for SkillSet
CREATE TYPE SkillSet_Type AS TABLE OF Skill_Type;


-- Define type for Children
CREATE TYPE Children_Type AS OBJECT (
    name VARCHAR2(30),
    birthday DATE
);
-- Define a Nested Table type for ChildrenSet
CREATE TYPE ChildrenSet_Type AS TABLE OF Children_Type;


--//create table EMP//
CREATE TABLE Emp (
```

```sql
    ename VARCHAR2(30),

    ChildrenSet ChildrenSet_Type,

    SkillSet SkillSet_Type
)
NESTED TABLE ChildrenSet STORE AS children_store_table

NESTED TABLE SkillSet STORE AS skill_store_table

(NESTED TABLE ExamSet STORE AS exam_store_table);


---insertion of Data---
INSERT INTO Emp VALUES (

    'John Doe',

    ChildrenSet_Type(

        Children_Type('Alice', DATE '1999-12-31'),

        Children_Type('Bob', DATE '2005-05-15')

    ),

    SkillSet_Type(

        Skill_Type('typing', ExamSet_Type(Exam_Type(2001, 'Dayton'))),

        Skill_Type('programming', ExamSet_Type(Exam_Type(2020, 'New York')))

    )
);


INSERT INTO Emp VALUES (

    'Jane Smith',

    ChildrenSet_Type(

        Children_Type('Charlie', DATE '2002-11-23')

    ),

    SkillSet_Type(

        Skill_Type('management', ExamSet_Type(Exam_Type(2018, 'Boston'))),

        Skill_Type('typing', ExamSet_Type(Exam_Type(2019, 'Dayton')))

    )
);
```

```sql
INSERT INTO Emp VALUES (
  'David Brown',
  ChildrenSet_Type(
    Children_Type('Eva', DATE '1998-08-08')
  ),
  SkillSet_Type(
    Skill_Type('design', ExamSet_Type(Exam_Type(2015, 'Chicago')))
  )
);
```

--Q.1 Find the names of all employees who have a child born on or after January 1, 2000.

--sql--

```sql
SELECT
  e.ename
FROM
  Emp e,
  TABLE(e.ChildrenSet) c
WHERE
  c.birthday >= DATE '2000-01-01';
```

Q.2

```sql
SELECT
  e.ename
FROM
  Emp e,
  TABLE(e.SkillSet) s,
  TABLE(s.ExamSet) ex
WHERE
  s.type = 'typing'
  AND ex.city = 'Dayton';
```
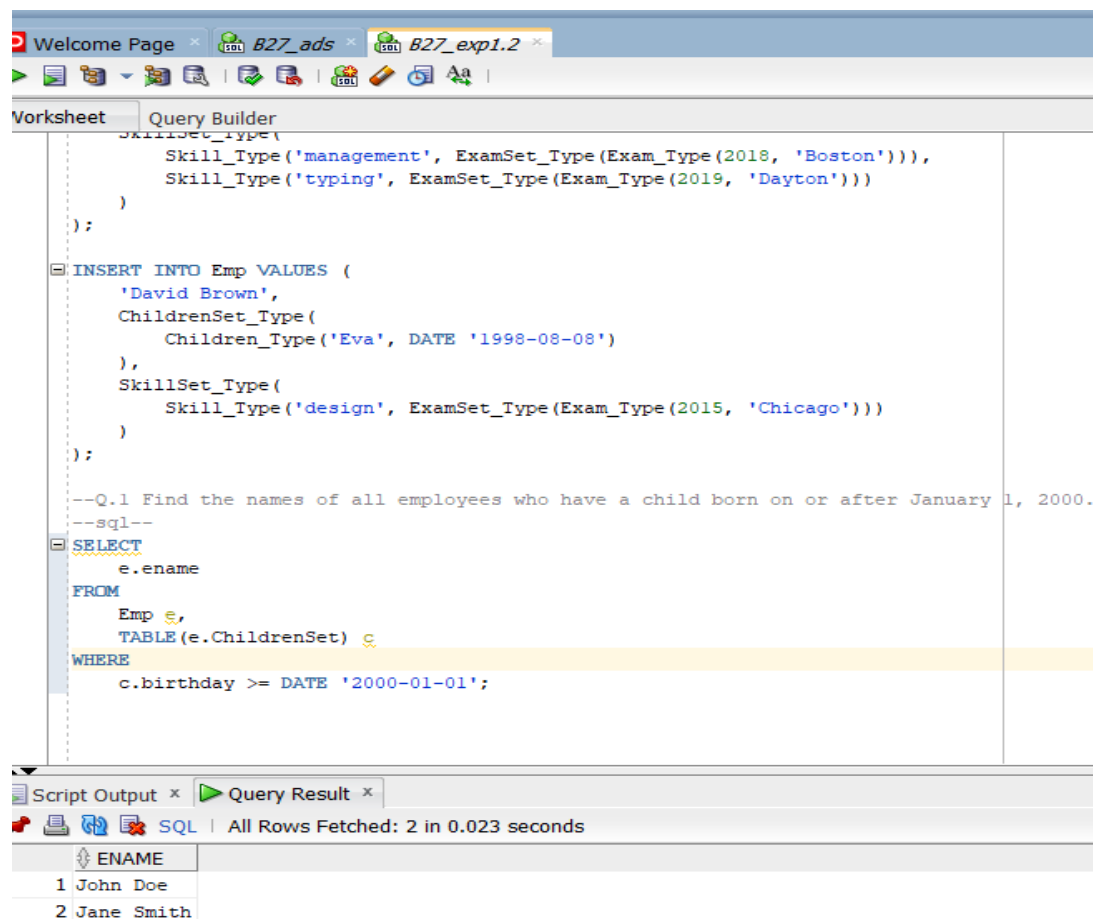
Q.3

SELECT DISTINCT

   s.type

FROM

   Emp e,

   TABLE(e.SkillSet) s;

Q.1 Find the names of all employees who have a child born on or after January 1, 2000.


```
Welcome Page ×   B27_ads ×   B27_exp1.2 ×

Worksheet    Query Builder

        SkillSet_Type(
            Skill_Type('management', ExamSet_Type(Exam_Type(2018, 'Boston'))),
            Skill_Type('typing', ExamSet_Type(Exam_Type(2019, 'Dayton')))
        )
    );

    INSERT INTO Emp VALUES (
        'David Brown',
        ChildrenSet_Type(
            Children_Type('Eva', DATE '1998-08-08')
        ),
        SkillSet_Type(
            Skill_Type('design', ExamSet_Type(Exam_Type(2015, 'Chicago')))
        )
    );

    --Q.1 Find the names of all employees who have a child born on or after January 1, 2000.
    --sql--
    SELECT
        e.ename
    FROM
        Emp e,
        TABLE(e.ChildrenSet) c
    WHERE
        c.birthday >= DATE '2000-01-01';
```

```
Script Output ×   Query Result ×
   SQL | All Rows Fetched: 2 in 0.023 seconds
      ENAME
   1 John Doe
   2 Jane Smith
```

Q.2 Find those employees who took an examination for the skill type "typing" in the city "Dayton".

```
            Skill_Type('design', ExamSet_Type(Exam_Type(:
        )
);

--Q.1 Find the names of all employees who have a chil
--sql--
SELECT
    e.ename
FROM
    Emp e,
    TABLE(e.ChildrenSet) c
WHERE
    c.birthday >= DATE '2000-01-01';

Q.2
SELECT
    e.ename
FROM
    Emp e,
    TABLE(e.SkillSet) s,
    TABLE(s.ExamSet) ex
WHERE
    s.type = 'typing'
    AND ex.city = 'Dayton';
```

Script Output ×   Query Result ×

SQL | All Rows Fetched: 2 in 0.029 seconds

	ENAME
1	John Doe
2	Jane Smith

Q.3 List all skill types in the relation Emp.


```
SELECT
    e.ename
FROM
    Emp e,
    TABLE(e.ChildrenSet) c
WHERE
    c.birthday >= DATE '2000-01-01';

Q.2
SELECT
    e.ename
FROM
    Emp e,
    TABLE(e.SkillSet) s,
    TABLE(s.ExamSet) ex
WHERE
    s.type = 'typing'
    AND ex.city = 'Dayton';

Q.3
SELECT DISTINCT
    s.type
FROM
    Emp e,
    TABLE(e.SkillSet) s;
```

Script Output ×   Query Result ×

SQL | All Rows Fetched: 4 in 0.01 seconds

	TYPE
1	typing
2	programming
3	management
4	design