

Name : Additya Dharangaonkar

NUID : 001052304

Question 1

Part 1: Import the two provided data files (csv) into an ArangoDB database to create a graph.

```
Command Prompt
lines read: 12
C:\Program Files\ArangoDB3e 3.7.10\usr\bin>arangoimport --file worksfor.csv --collection workfor --create-collection true --type csv --create-collection-type edge
Please specify a password:
Connected to ArangoDB 'http+tcp://127.0.0.1:8529, version: 3.7.10, database: '_system', username: 'root'
-----
database:      _system
collection:    workfor
create:        yes
create database: no
source filename: worksfor.csv
file type:     csv
quote:         "
separator:
threads:       2
connect timeout: 5
request timeout: 1200
-----
Starting CSV import...
created:      10
warnings/errors: 0
updated/replaced: 0
ignored:      0
lines read:   12
C:\Program Files\ArangoDB3e 3.7.10\usr\bin>
```

```
C:\Users>cd ..
C:\>cd Program Files\ArangoDB3e 3.7.10\usr\bin
C:\Program Files\ArangoDB3e 3.7.10\usr\bin>arangoimport --file employeeNodes.csv --collection employee --create-collection true --type csv
Please specify a password:
Connected to ArangoDB 'http+tcp://127.0.0.1:8529, version: 3.7.10, database: '_system', username: 'root'
-----
database:      _system
collection:    employee
create:        yes
create database: no
source filename: employeeNodes.csv
file type:     csv
quote:         "
separator:
threads:       2
connect timeout: 5
request timeout: 1200
-----
Starting CSV import...
created:      21
warnings/errors: 0
updated/replaced: 0
ignored:      0
lines read:   23
```

Part 2: Using the data imported above, write an AQL query to retrieve Employee ID 7's direct reports.
The returned data should have the format displayed below.

FOR e IN 1..1 INBOUND

'employee/7' workfor

RETURN {name : e.lastname}

The screenshot shows the ArangoDB web interface. On the left is a sidebar with navigation links: DASHBOARD, COLLECTIONS, VIEWS, QUERIES, GRAPHS, SERVICES, USERS, DATABASES, REPLICATION, LOGS, SUPPORT, and HELP US. The main area is titled 'Editor' and contains an AQL query editor with the following code:

```
1 //find e in employee
2 //return e
3
4
5
6 FOR e IN 1..1 INBOUND
7   'employee/7' workfor
8   RETURN {name : e.lastname}
```

Below the editor, there are buttons for 'Remove all results', 'Create Debug Package', 'Print', 'Explain', and 'Execute'. The 'Execute' button has been clicked, and the results are displayed in a table below. The table has a header row with 'name' and a body with three rows: 'Chang', 'Ng', and 'Black'. The table is titled 'Query' and shows '3 elements' and '0.366 ms' execution time. At the bottom right of the table are buttons for 'Download', 'Copy', and 'Copy to Editor'.

name
Chang
Ng
Black

Part 3: Using the data imported above, write an AQL query to retrieve all employees supervised by 2 directly or indirectly.

FOR v, e, p IN 1..5 INBOUND 'employee/2' WORKFOR

OPTIONS {

bfs: true,

uniqueVertices: 'none',

uniqueEdges: 'path'

}

RETURN CONCAT_SEPARATOR('-', p.vertices[*]._key)

The screenshot shows the ArangoDB web interface. On the left is a sidebar with navigation options: Dashboard, Collections, Views, Queries, Graphs, Services, Users, Databases, Replication, Logs, Support, and Help Us. The main area is divided into two panes. The top pane contains an AQL query editor with the following code:

```
1 //FOR e IN employee
2 //RETURN e
3
4
5 //FOR e IN 1..5 INBOUND
6 //employee/2' workfor
7 //RETURN (new 1 & lastname)
8
9
10 FOR v, e, p IN 1..5 INBOUND 'employee/2' workfor
11 OPTIONS {
12   bfs: true,
13   uniqueVertices: 'none',
14   uniqueEdges: 'path'
15 }
16 RETURN CONCAT_SEPARATOR('-', p.vertices[*]._key)
```

The bottom pane displays the results of the query, showing a list of 20 strings representing paths of vertices connected by hyphens. The results are:

- 1 "2-18"
- 2 "2-18"
- 3 "2-18"
- 4 "2-18"
- 5 "2-18"
- 6 "2-18-18"
- 7 "2-18-18"
- 8 "2-18-18"
- 9 "2-18-18"
- 10 "2-18-18"
- 11 "2-18-18"
- 12 "2-18-18-18"
- 13 "2-18-18-18"
- 14 "2-18-18-18"
- 15 "2-18-18-18"
- 16 "2-18-18-18"
- 17 "2-18-18-18"
- 18 "2-18-18-18"
- 19 "2-18-18-18-18"
- 20 "2-18-18-18-18"

At the bottom right of the results pane, there are buttons for "Download" and "Copy To Editor".

Question 2
Dynamic SQL

```
CREATE PROC [dbo].[archive]
    @beginYr int,@endYr int
AS
BEGIN
    DECLARE @table varchar(100);
    DECLARE @log varchar(100);
    DECLARE @result int;
    DECLARE @q varchar(MAX);
    DECLARE @clinicid int;
    CREATE TABLE #temp
    (Clinic int,
      Total_Appointment_Count int);
    set @result = 0;
    DECLARE appointment_cursor CURSOR FOR
        select tablename,clinicid from archivelogp where appointmentyear between @beginYr
and @endYr;
    OPEN appointment_cursor;
    FETCH NEXT FROM appointment_cursor INTO @table,@clinicid;
    WHILE @@FETCH_STATUS = 0
    BEGIN
        SET @q = N'Select clinicid Clinic, count(*) cnt FROM archivelogp where tablename =
' + @table + ' group by clinicid';
        SELECT @clinicid, @result = @result + cast(exec(q) as int);
        INSERT INTO #temp VALUES (@clinicid, @result);
    END
END
```