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207919
MCA, II Year

Knowledge Engineering LAB

Assignment 4

Q1.

Solu.

A.

```
SELECT
    "A2"."CITY"              "CITY",
    "A1"."ITEM_NAME"          "ITEM NAME",
    SUM("A3"."DOLLARS_SOLD") "SUM(DOLLARS_SOLD)"
FROM
    "SYSTEM"."SALES"    "A3",
    "SYSTEM"."LOCATION" "A2",
    "SYSTEM"."ITEM"     "A1"
GROUP BY
    ROLLUP("A2"."CITY",
           "A1"."ITEM_NAME");
```

OUTPUT:

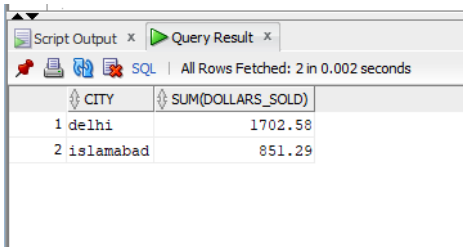
Script Output | Query Result | SQL | All Rows Fetched: 11 in 0.008 seconds

	CITY	ITEM NAME	SUM(DOLLARS_SOLD)
1	delhi	mobile	3405.16
2	delhi	tv	5107.74
3	delhi	console	3405.16
4	delhi	laptop	3405.16
5	islamabad	mobile	1702.58
6	islamabad	tv	2553.87
7	islamabad	console	1702.58
8	islamabad	laptop	1702.58
9	delhi	(null)	15323.22
10	islamabad	(null)	7661.61
11	(null)	(null)	22984.83

B.

```
SELECT
    "A2"."CITY"  "CITY",
    SUM("A1"."DOLLARS_SOLD") "SUM(DOLLARS_SOLD)"
FROM
    "SYSTEM"."SALES" "A1",
    "SYSTEM"."LOCATION" "A2"
GROUP BY "A2"."CITY";
```

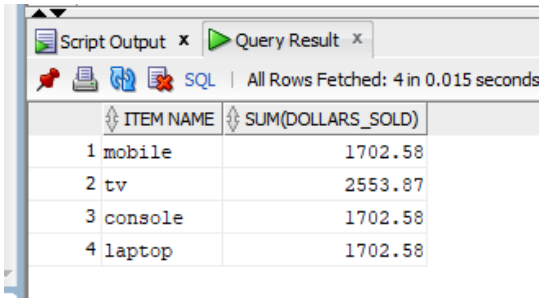
OUTPUT:



C.

```
SELECT
    "A2"."ITEM_NAME"  "ITEM NAME",
    SUM("A1"."DOLLARS_SOLD") "SUM(DOLLARS_SOLD)"
FROM
    "SYSTEM"."SALES" "A1",
    "SYSTEM"."ITEM" "A2"
GROUP BY "A2"."ITEM_NAME";
```

OUTPUT:



D.

Maximum number of cells in the base cuboid: 3888

E.

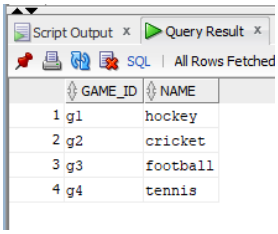
Minimum number of cells in the base cuboid: 1

Q2

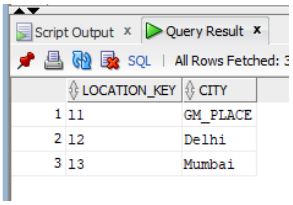
Solu.

Tables and their data

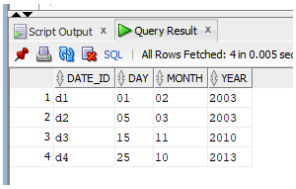
- Game Table



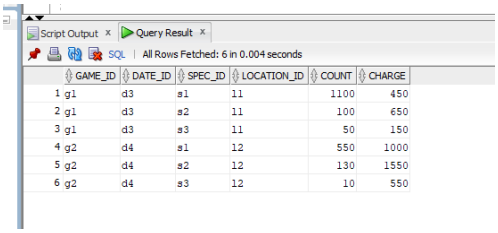
- Location_Game Table



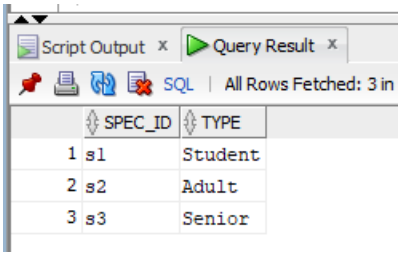
- Date_Game Table



- Sales_Game Table



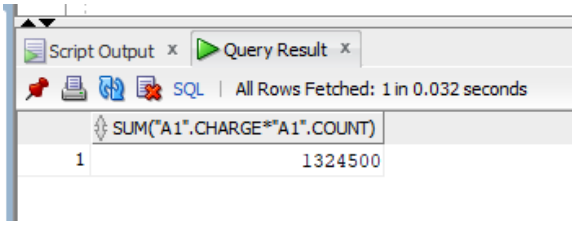
- Spectator Table



i)

```
SELECT
    SUM("A1".charge*"A1".count)
FROM
    "SYSTEM"."SALES_GAME"   "A1",
    "SYSTEM"."LOCATION_GAME"    "A2",
    "SYSTEM"."SPECTATOR"    "A3",
    "SYSTEM"."DATE_GAME"    "A4"
WHERE
    (
        "A2".city='GM_PLACE' and
        "A4".year='2010' and
        "A3".type='Student'
    )
GROUP BY
    "A2".city;
```

OUTPUT:

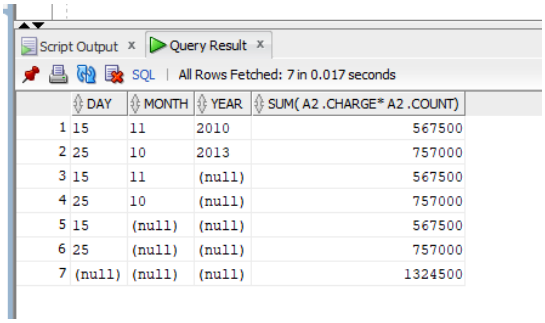


ii)

```
SELECT
    "A1"."DAY"                          "DAY",
    "A1"."MONTH"                        "MONTH",
    "A1"."YEAR"                         "YEAR",
    SUM("A2"."CHARGE" * "A2"."COUNT") "SUM( A2 .CHARGE* A2 .COUNT)"
FROM
    "SYSTEM"."SALES_GAME" "A2",
    "SYSTEM"."DATE_GAME"  "A1"
WHERE
    "A2"."DATE_ID" = "A1"."DATE_ID"
GROUP BY
    ROLLUP("A1"."DAY",
```

```
                    "A1"."MONTH",
                    "A1"."YEAR");
```

OUTPUT:



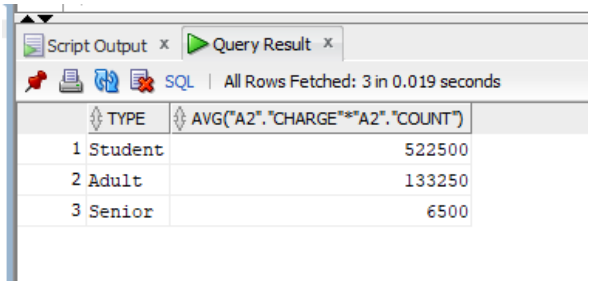
Script Output | Query Result | SQL | All Rows Fetched: 7 in 0.017 seconds

	DAY	MONTH	YEAR	SUM(A2 .CHARGE* A2 .COUNT)
1	15	11	2010	567500
2	25	10	2013	757000
3	15	11	(null)	567500
4	25	10	(null)	757000
5	15	(null)	(null)	567500
6	25	(null)	(null)	757000
7	(null)	(null)	(null)	1324500

iii)

```
SELECT
    "A1"."TYPE",
    AVG("A2"."CHARGE" * "A2"."COUNT")
FROM
    "SYSTEM"."SALES_GAME" "A2",
    "SYSTEM"."SPECTATOR" "A1"
WHERE
    "A1".SPEC_ID="A2".SPEC_ID
GROUP BY
    "A1"."TYPE";
```

OUTPUT:



Script Output | Query Result | SQL | All Rows Fetched: 3 in 0.019 seconds

	TYPE	AVG("A2"."CHARGE"*"A2"."COUNT")
1	Student	522500
2	Adult	133250
3	Senior	6500

iv)

Snowflake diagram for the above datawarehouse