After the data has been stored in your table, **provide SQL and the result** for the following queries:

a. Provide a list of laptops which include information about Average Battery Life (in hours). The result should display laptop number, item model number, operating system and average battery life.
b. Provide a report which lists all laptops that have their item weight greater than 1 kg. The result should display laptop number, product description, price and item weight.
c. Provide a report which lists all laptops that have their screen resolutions of at least a full HD. A full HD screen resolution or better must have at least 1920 pixels in length and 1080 pixels in width. The result should show laptop number, ram capacity, and the screen size (in pixels) in the numerical format of **L x W** (e.g. **1920 x 1080)**.
d. Provide a report on laptops whose batteries are not a combination of "battery **type"** lithium and "battery **charge technology"** ion. The result should show laptop number, item model number, **battery type** (e.g., lithium, nickel metal hydride (NiMH), nickel cadmium (NiCad)) and **battery charge technology** (e.g., metal, polymer or ion for lithium batteries and perhaps, **other** for other battery types) **[20 marks].**

Answer a: (1.sql)

Worksheet | Query Builder

```
1  SELECT
2  ID "Laptop Number" ,
3  extractValue(laptop_doc, 'techsum/ModelNumber') "Model Number",
4  extractValue(laptop_doc, 'techsum/OperatingSystem') "Operating System",
5  extractValue(laptop_doc, 'techsum/Hardware/Batteries/@averageBatteryLife') "Average Battery Life"
6  FROM laptop
7  WHERE extractValue(laptop_doc, 'techsum/Hardware/Batteries/@averageBatteryLife') != 0;
```

Script Output | Query Result

SQL | All Rows Fetched: 4 in 0.003 seconds

	Laptop Number	Model Number	Operating System	Average Battery Life
1	113	C202SA-YS02	Chrome	10
2	114	MPTT2LL/A	MacOS Sierra	10
3	115	D9P-00020	Windows 10 S	8.5
4	116	4122904	Windows 10 Home Ultra	7.5

Answer b: (2.sql)

```
SELECT id,
       xmldoc.productdescription,  concat(xmldoc.pricecurrency ,xmldoc.price),
       xmldoc.weight
FROM   laptop,
       XMLTABLE('/techsum' passing laptop.laptop_doc COLUMNS productdescription VARCHAR2(50) path 'ProductDescription',
        pricecurrency VARCHAR2(3) path 'Price/@Currency',
        price VARCHAR2(8) path 'Price',
        weightunit VARCHAR2(7) path 'ItemWeight/@Unit',
        weight FLOAT(10) path 'ItemWeight' ) xmldoc
WHERE  (
              xmldoc.weight > 1
       AND    xmldoc.weightunit = 'KG')
OR     (
              xmldoc.weight > 2.2
       AND    xmldoc.weightunit = 'Pounds');
```

Script Output | Query Result | SQL | All Rows Fetched: 3 in 0.001 seconds

	ID	PRODUCTDESCRIPTION	CONCAT(XMLDOC.PRICECURRENCY,XMLDOC.PRICE)	WEIGHT
1	114	Apple 15" MacBook Pro(Newest Version)	USD2549.00	2.9
2	115	Go beyond the traditional laptop with Surface Lapt	AUD1272.00	1.25
3	116	MSI GS73 Stealth 8RF-009AU 17.3" 120Hz Gaming Lapt	AUD3699.00	1.9

Answer c: (3.sql)

LOCAL — 0.009 seconds

```
SELECT id "Laptop Number",
       Extractvalue(laptop_doc, 'techsum/Hardware/RAM') "RAM",
       CONCAT(
       CONCAT(
       SUBSTR( Extractvalue(laptop_doc, 'techsum/Hardware/Screen/MaxScreenResolution'), 1,4 ) ,
       ' × '),
       SUBSTR( Extractvalue(laptop_doc, 'techsum/Hardware/Screen/MaxScreenResolution'), 8 ))
       "Max Screen Resolution"
FROM   laptop
WHERE  SUBSTR( Extractvalue(laptop_doc, 'techsum/Hardware/Screen/MaxScreenResolution'), 1,4 ) >= 1920
       AND
       SUBSTR( Extractvalue(laptop_doc, 'techsum/Hardware/Screen/MaxScreenResolution'), 8 ) >= 1080;
```

Script Output | Query Result | SQL | All Rows Fetched: 4 in 0.001 seconds

	Laptop Number	RAM	Max Screen Resolution
1	112	8	2400 × 1600
2	114	16	2880 × 1800
3	115	4	2256 × 1504
4	116	16	1920 × 1080

Answer d: (4.sql)