

```
SELECT * FROM sql_cx_live.laptops;
```

```
SELECT * FROM laptops;
```

```
-- CREATE BACKUP OF TABLE.CREATE TABLE laptops_backup LIKE  
laptops;
```

```
INSERT INTO laptops_backup SELECT * FROM laptops;
```

```
-- CHECK NUMBER OF ROWS.
```

```
SELECT COUNT(*) FROM laptops;
```

```
-- CHECK MEMORY CONSUMPTION FOR REFERENCE.SELECT  
DATA_LENGTH/1024 FROM information_schema.TABLES WHERE  
TABLE_SCHEMA = 'sql_cx_live'AND TABLE_NAME = 'laptops';
```

```
--DROP NON IMPORTANT COLS.SELECT * FROM laptops;ALTER  
TABLE laptops DROP COLUMN `Unnamed: 0`; SELECT * FROM laptops;
```

```
--DROP NULL VALUES.(USED SUB QUERRY)DELETE FROM laptops  
WHERE `index` IN (SELECT `index` FROM laptopsWHERE Company IS  
NULL AND TypeName IS NULL AND Inches IS NULL AND  
ScreenResolution IS NULL AND Cpu IS NULL AND Ram IS NULL AND  
Memory IS NULL AND Gpu IS NULL AND OpSys IS NULL AND WEIGHT  
IS NULL AND Price IS NULL);
```

```
--DROP DUPLICATES.SELECT DISTINCT(Company) FROM laptops;  
SELECT DISTINCT(TypeName) FROM laptops;
```

```
--CHANGE DATA TYPE OF INCHES COL.ALTER TABLE laptops  
MODIFY COLUMN Inches DECIMAL(10,1); SELECT * FROM laptops;
```

```
--CLEAN RAM -> CHANGE RAM COL DATATYPE.UPDATE laptops I1  
SET Ram = (SELECT REPLACE(Ram,'GB','') FROM laptops I2 WHERE  
I2.index = I1.index);
```

```
SELECT * FROM laptops;ALTER TABLE LAPTOPS MODIFY COLUMN  
RAM INTEGER;
```

-- CHECKING WEATHER MEMORY CONSUMPTION IS REDUCED OR NOT.

```
SELECT DATA_LENGTH/1024 FROM information_schema.TABLES  
WHERE TABLE_SCHEMA = 'sql_cx_live'AND TABLE_NAME = 'laptops';
```

--CLEAN WEIGHT -> CHANGE WEIGHT COL DATATYPE.

```
UPDATE laptops I1SET Weight = (SELECT REPLACE(Weight,'kg','")
```

```
FROM laptops I2 WHERE I2.index = I1.index);
```

```
ALTER TABLE LAPTOPS MODIFY COLUMN WEIGHT INTEGER;
```

```
SELECT * FROM laptops;
```

--CLEAN PRICE -> CHANGE PRICE COL DATATYPE. ROUND PRICE COL AND CHANGE TO INTEGER.UPDATE laptops I1SET Price =
(SELECT ROUND(Price)

```
FROM laptops I2 WHERE I2.index = I1.index); ALTER TABLE LAPTOPS  
MODIFY COLUMN PRICE INTEGER;
```

-- CHECKING WEATHER MEMORY CONSUMPTION IS REDUCED OR NOT.

```
SELECT DATA_LENGTH/1024 FROM information_schema.TABLES  
WHERE TABLE_SCHEMA = 'sql_cx_live'AND TABLE_NAME = 'laptops';
```

--CHANGE THE OPSYS COL.

```
SELECT DISTINCT OPSYS FROM LAPTOPS;
```

- mac- windows- linux

- no os- Android chrome(others)

```
SELECT OpSys, CASE
```

```
WHEN OpSys LIKE '%mac%' THEN 'macos' WHEN OpSys LIKE  
'windows%' THEN 'windows' WHEN OpSys LIKE '%linux%' THEN 'linux'  
WHEN OpSys = 'No OS' THEN 'N/A'ELSE 'other'
```

```
END AS 'os_brand' FROM laptops;
```

```
UPDATE laptops SET OpSys = CASE
```

```
WHEN OpSys LIKE '%mac%' THEN 'macos' WHEN OpSys LIKE  
'windows%' THEN 'windows' WHEN OpSys LIKE '%linux%' THEN 'linux'  
WHEN OpSys = 'No OS' THEN 'N/A'ELSE 'other'
```

```
END;
```

```
--GPUSELECT * FROM laptops;
```

```
ALTER TABLE laptopsADD COLUMN gpu_brand VARCHAR(255) AFTER  
Gpu,ADD COLUMN gpu_name VARCHAR(255) AFTER gpu_brand;  
SELECT * FROM laptops;
```

```
UPDATE laptops I1SET gpu_brand = (SELECT  
SUBSTRING_INDEX(Gpu,' ',1)
```

```
FROM laptops I2 WHERE I2.index = I1.index);
```

```
UPDATE laptops I1SET gpu_name = (SELECT  
REPLACE(Gpu,gpu_brand,")
```

```
FROM laptops I2 WHERE I2.index = I1.index); SELECT * FROM laptops;
```

```
ALTER TABLE laptops DROP COLUMN Gpu; SELECT * FROM laptops;
```

```
--CPU
```

```
ALTER TABLE laptops ADD COLUMN cpu_brand VARCHAR(255) AFTER  
Cpu, ADD COLUMN cpu_name VARCHAR(255) AFTER cpu_brand, ADD  
COLUMN cpu_speed DECIMAL(10,1) AFTER cpu_name;
```

```
SELECT * FROM laptops;
```

```
UPDATE laptops I1 SET cpu_brand = (SELECT  
SUBSTRING_INDEX(Cpu, ' ', 1)
```

```
FROM laptops I2 WHERE I2.index = I1.index);
```

```
UPDATE laptops I1 SET cpu_speed = (SELECT  
CAST(REPLACE(SUBSTRING_INDEX(Cpu, ' ', -1), 'GHz', ''))
```

```
AS DECIMAL(10,2)) FROM laptops I2 WHERE I2.index = I1.index);
```

```
UPDATE laptops I1 SET cpu_name = (SELECT
```

```
REPLACE(REPLACE(Cpu, cpu_brand, ''), SUBSTRING_INDEX(REPLACE  
(Cpu, cpu_brand, ''), ' ', -1), '') FROM laptops I2
```

```
WHERE I2.index = I1.index); SELECT * FROM laptops;
```

```
ALTER TABLE laptops DROP COLUMN Cpu;
```

```
-----  
-----  
-----  
-----  
-----  
-----  
-----  
-----
```

- - SCREEN RESOLUTION

```
SELECT ScreenResolution,  
SUBSTRING_INDEX(SUBSTRING_INDEX(ScreenResolution,' ',-1),'x',1),  
SUBSTRING_INDEX(SUBSTRING_INDEX(ScreenResolution,' ',-1),'x',-1)  
FROM laptops;
```

```
ALTER TABLE laptopsADD COLUMN resolution_width INTEGER AFTER  
ScreenResolution, ADD COLUMN resolution_height INTEGER AFTER  
resolution_width;
```

```
SELECT * FROM laptops;
```

```
UPDATE laptopsSET resolution_width =  
SUBSTRING_INDEX(SUBSTRING_INDEX(ScreenResolution,' ',-1),'x',1),  
resolution_height =  
SUBSTRING_INDEX(SUBSTRING_INDEX(ScreenResolution,' ',-1),'x',-1);
```

```
ALTER TABLE laptopsADD COLUMN touchscreen INTEGER AFTER  
resolution_height;
```

```
SELECT ScreenResolution LIKE '%Touch%' FROM laptops;
```

```
UPDATE laptopsSET touchscreen = ScreenResolution LIKE '%Touch%';
```

```
SELECT * FROM laptops;
```

```
ALTER TABLE laptopsDROP COLUMN ScreenResolution;
```

- Again CPU_NAME COL

```
SELECT * FROM laptops;
```

```
SELECT cpu_name, SUBSTRING_INDEX(TRIM(cpu_name),' ',2) FROM  
laptops;
```

```
UPDATE laptopsSET cpu_name =  
SUBSTRING_INDEX(TRIM(cpu_name),' ',2);
```

```
SELECT DISTINCT cpu_name FROM laptops;
```

—Memory

```
SELECT Memory FROM laptops;
```

```
ALTER TABLE laptops ADD COLUMN memory_type VARCHAR(255)
AFTER Memory, ADD COLUMN primary_storage INTEGER AFTER
memory_type, ADD COLUMN secondary_storage INTEGER AFTER
primary_storage;
```

```
SELECT Memory, CASE
```

```
WHEN Memory LIKE '%SSD%' AND Memory LIKE '%HDD%' THEN
'Hybrid'
```

```
WHEN Memory LIKE '%SSD%' THEN 'SSD' WHEN Memory LIKE '%HDD
%' THEN 'HDD' WHEN Memory LIKE '%Flash Storage%' THEN 'Flash
Storage'
```

```
WHEN Memory LIKE '%Hybrid%' THEN 'Hybrid' WHEN Memory LIKE
'%Flash Storage%' AND Memory LIKE '%HDD%' THEN 'Hybrid' ELSE
NULL
```

```
END AS 'memory_type' FROM laptops;
```

```
UPDATE laptops SET memory_type = CASE
```

```
WHEN Memory LIKE '%SSD%' AND Memory LIKE '%HDD%' THEN
'Hybrid'
```

```
WHEN Memory LIKE '%SSD%' THEN 'SSD' WHEN Memory LIKE '%HDD
%' THEN 'HDD' WHEN Memory LIKE '%Flash Storage%' THEN 'Flash
Storage'
```

```
WHEN Memory LIKE '%Hybrid%' THEN 'Hybrid' WHEN Memory LIKE
'%Flash Storage%' AND Memory LIKE '%HDD%' THEN 'Hybrid' ELSE
NULL
```

END;

SELECT * FROM laptops;

SELECT Memory,
REGEXP_SUBSTR(SUBSTRING_INDEX(Memory,'+',1),'[0-9]+'),CASE
WHEN Memory LIKE '%+%' THEN
REGEXP_SUBSTR(SUBSTRING_INDEX(Memory,'+',-1),'[0-9]+') ELSE 0
END FROM laptops;

UPDATE laptopsSET primary_storage =
REGEXP_SUBSTR(SUBSTRING_INDEX(Memory,'+',1),'[0-9]+'),
secondary_storage = CASE WHEN Memory LIKE '%+%' THEN
REGEXP_SUBSTR(SUBSTRING_INDEX(Memory,'+',-1),'[0-9]+') ELSE 0
END;

SELECTprimary_storage,CASE WHEN primary_storage <= 2 THEN
primary_storage*1024 ELSE primary_storage END, secondary_storage,
CASE WHEN secondary_storage <= 2 THEN secondary_storage*1024
ELSE secondary_storage ENDFROM laptops;

UPDATE laptopsSET primary_storage = CASE WHEN primary_storage
<= 2 THEN primary_storage*1024 ELSE primary_storage END,
secondary_storage = CASE WHEN secondary_storage <= 2 THEN
secondary_storage*1024 ELSE secondary_storage END;

SELECT * FROM laptops;

ALTER TABLE laptops DROP COLUMN Memory;

ALTER TABLE laptops DROP COLUMN gpu_name;

SELECT * FROM laptops;