

Plumeria Café - Project Normalization (Member: Heather Rohr)

Normalization for COMPUTER_LOG *

*This option had more attributes than the original option in Access in File (as of November 17, 2017). Dates are American and go by Month/Day/Year.

CounterCode (Primary Key)	Date_Of_Use	cID (Foreign Key)	c_Last_Family_Name (Foreign key)	cDeskLocation (Foreign Key)	cComputerID (Foreign Key)	RouterID (Foreign Key)
1	10/12/2017	2	Rojo	4	4	2
2	10/12/2017	1	Dickens	3	3	2
3	10/13/2017	4	Lang	1	1	2
4	10/13/2017	3	Guapo	7	7	3
5	10/13/2017	2	Rojo	4	4	2

1NF / CounterCode, Date_Of_Use, cID, cDeskLocation

2NF cID → c_Last_Family_Name

cComputerID → cDeskLocation

3NF

CUSTOMERS (cID (primary), c_Last_Family_Name)

CAFÉ_COMPUTERS (cComputerID (primary), cDeskLocation, RouterID (foreign key))

ASSIGNED_ROUTERS (cID, RouterID (Primary))

COMPUTER_LOG (CounterCode (primary), Date_Of_Use, cID (foreign key), cDeskLocation (foreign key))*

*These were attributes for Computer_Log in Access File

Normalization of EMPLOYEES (when including foreign key from *Internet_Routers*)

eID (Primary Key)	E_First_Given_Name	E_Last_Family_Name	Position	e_Local_Address	E_Perm_Address	E_Contact_Number	wComputerID (Foreign Key)	RouterID (Foreign Key)
1	Hope R.	Graceful	Supervisor	107 Murray Ave San Diego, CA	107 Murray Ave San Diego, CA	315-906-1992	1	1
2	Timothy B.	Lee	Greeting Technician	89 Center Blvd San Diego, CA	55 Royal Blue Ave London, England	858-515-1988	2	1
7	Penny D.	Blooms	Greeting Cashier	University Hall Room 117B San Diego, CA	19 Morgan Road Mexico, NY	315-990-1996	1	1

1NF / eID, Position, wComputerID, RouterID

2NF eID → E_Last_Family_Name → Position

3NF

EMPLOYEES (eID (primary), e_Last_Family_Name, Position, wComputerID (foreign key))

WORK_COMPUTERS (wComputerID (primary), RouterID (foreign key))

INTERNET_ROUTERS (RouterID)

ASSIGNED_COMPUTERS (eID, wComputerID, RouterID)

Original Table Examples for Project (as of November 17, 2017)

Customers

cID	C_First_Given_Name	C_Last_Family_Name	C_Billing_Address	C_Contact_Number
1	Contra	Dickens	22 Doubtful Ave Los Angeles, CA	213-636-0000
2	Baron	Rojo	76 Aviator Blvd Lynchburg, VA	434-555-1945
3	Juan	Guapo	505 Sunny Place San Diego, CA	619-199-2013
4	Carrie	Lang	305 Denson St Los Angeles, CA	213-555-2015

Café_Computers

cComputerID (Primary Key)	cBrand	cServiceTag	cMonitor	cKeyboard_Type	cMouse_Type	cSurge_Protector	cSurge_Battery_Type	cSystem	cDeskLocation	Router (F.K.)
1	DellPC	1OHANA1	VT207N Asus Model	Microsoft Wired 600	Dell 9RRC7 (wired)	APC Back-UPS 425VA UPS	RBC 110 (425 VA)	Windows10	1	2
3	Apple	0X0X0X0X	Null	Mac Wired	Apple A1152 (wired)	APC Back-UPS 425VA UPS	RBC 110 (425 VA)	Lion	3	2
4	DellPC	4TNTWN1	VT207N Asus Model	Microsoft Wired 600	Dell 9RRC7 (wired)	APC Back-UPS 425VA UPS	RBC 110 (425 VA)	Windows10	4	2
7	Linux	PNGN111	VT207N Asus Model	Dell Wired	Dell 9RRC7 (wired)	APC Back-UPS 425VA UPS	RBC 110 (425 VA)	Ubuntu 8.10	7	3
8	DellPC	7PCWND1	null	null	null	null	null	Windows7	Storage	null
9	Linux	LNx2222	VT207N Asus Model	AmazonBasic Wired	Dell 9RRC7 (wired)	APC Back-UPS 425VA UPS	RBC 110 (425 VA)	LinuxMint	8	3

*Note: Originally, the cDeskLocation and cComputerID would be not be the same "number" for some computers when select serves are storage or not in use.

Internet_Routers

RouterID (Primary Key)	rBrand	rSerial_Number
1	NETGEAR Router nx00	205xx333111
2	NETGEAR Router nx00	205xx333222
3	NETGEAR Router nx00	205xx3331212

Employees

eID (Primary Key)	E_First_Given_Name	E_Last_Family_Name	Position	e_Local_Address	E_Perm_Address	E_Contact_Number	wComputer ID (Foreign Key)
1	Hope R.	Graceful	Supervisor	107 Murray Ave San Diego, CA	107 Murray Ave San Diego, CA	315-906-1992	1
2	Timothy B.	Lee	Greeting Technician	89 Center Blvd San Diego, CA	55 Royal Blue Ave London, England	858-515-1988	2
7	Penny D.	Blooms	Greeting Cashier	University Hall Room 117B San Diego, CA	19 Morgan Road Mexico, NY	315-990-1996	1

* wComputerID may also be called "Assigned_Computer" that are assigned to "Employees", although the employees may use any of the "Work_Computers".

Work_Computer

wComputers (Primary Key)	wBrand	wServiceTag	wMonitor	wKeyboard_Type	wMouse_Type	wSurge_Protector	wSurge_Battery_Type	wSystem	wLocation	RouterID (Foreign Key)
1	DellPC	1ENRCS8	MG248Q Asus Monitor	Dell Wired	iHome IHM806OM (optical, wired)	APC Back-UPS 425VA UPS	RBC 110 (425 VA)	Windows10	Entrance	1
2	DellPC	2TWENR1	MG248Q Asus Monitor	Dell Wired	iHome IHM806OM (optical, wired)	APC Back-UPS 425VA UPS	RBC 110 (425 VA)	Windows10	Entrance	1

Computer_Log (Original on my Access File)

CounterCode (Primary Key)	Date_Of_Use	cID (Foreign Key)	cDeskLocation (Foreign Key)
1	10/12/2017	2	4
2	10/12/2017	1	3
3	10/13/2017	4	1
4	10/13/2017	3	7
5	10/13/2017	2	4

Computer_Log (Option 2, used for Normalization)

CounterCode (Primary Key)	Date_Of_Use	cID (Foreign Key)	C_Last_Family_Name (Foreign key)	cDeskLocation (Foreign Key)	cComputerID (Foreign Key)	RouterID (Foreign Key)
1	10/12/2017	2	Rojo	4	4	2
2	10/12/2017	1	Dickens	3	3	2
3	10/13/2017	4	Lang	1	1	2
4	10/13/2017	3	Guapo	7	7	3
5	10/13/2017	2	Rojo	4	4	2