Name: Danish Sharma
UserLogin: dbs211_212b27
ID: 148201205

USER VIEW

ENG-A-PLUS
INVOICE

Invoice Num: EAP-44720	**Invoice Date: Oct 17, 2019**

Customer : 103 – Sears Canada
Address : 417 Allstate Road
Toronto, ON
M2N 6H4

Project : Build North Bay Shopping Centre
Project Type : 5 – Build Shopping Centre
Location : North Bay, ON

Engineering Charges

Employee	Skill	Skill Hourly Rate	Date	Hrs.	Charge
Hall, Roy	Produce Blueprints	100.00	2005-10-10	7.0	700.00
			2005-10-11	6.5	650.00
Relton, Joan	Produce Blueprints	100.00	2005-10-10	6.0	600.00
			2005-10-11	7.5	750.00
Rogers, Ann	Supervise Foundation	150.00	2005-10-12	7.0	1050.00
			2005-10-13	6.0	900.00
			2005-10-14	7.0	1050.00
Wang, Alex	Electrical Supervisor	150.00	2005-10-13	7.0	1050.00
			2005-10-14	6.0	900.00

Sub-total Engineering Charges: $7,600.00

Equipment Charges

Equipment Number	Date	Total Hours	Hourly Rate	Charge
P100 - Kodac Photocopier	2005-10-14	7.0	60.00	420.00
CMT22 -Concrete Mixer Truck	2005-10-14	8.0	250.00	2000.00
CMT22 -Concrete Mixer Truck	2005-10-15	8.0	250.00	2000.00

Sub-total Equipment Charges: $4,420.00

Total Charges:	$12,020.00
PST(8%):	$961.60
GST(7%):	$841.40
Grand Total This Invoice:	**$13,823.00**

UNF:

INVOICE [Invoice_Num, Invoice_Date, Customer_ID, Customer_Name, Customer_Address, Customer_City, Customer_Province, Customer_PostalCode, Project_Name, Project_ID, Project_Description, Location_City, Location_Province,

(Employee_Firstname, Employee_LastName, Employee_Skill, Employee_Rate, Employee_Work_Date, Employee_Bill_Hours) ,

(Equipment_ID, Equipment_Description, Equipment_Used_Date, Equipment_Hours, Equipment_Rate)]

Determine the 1NF ,the 2NF ,the 3NF based on UNF provided.

1NF:

INVOICE [Invoice_Num (PK), Invoice_Date, Customer_ID, Customer_Name, Customer_Address, Customer_City, Customer_Province, Customer_PostalCode, Project_Name, Project_ID, Project_Description, Location_City, Location_Province]

EMPLOYEEWORK [Invoice_Num (PK), Employee_Firstname (PK), Employee_LastName (PK), Employee_Skill (PK), Employee_Rate, Employee_Work_Date, Employee_Bill_Hours

EQUIPMENTUSE [Invoice_Num (PK), Equipment_ID (PK), Equipment_Description, Equipment_Used_Date, Equipment_Hours, Equipment_Rate]

2NF:

INVOICE [Invoice_Num (PK), Invoice_Date, Customer_ID, Customer_Name, Customer_Address, Customer_City, Customer_Province, Customer_PostalCode, Project_Name, Project_ID, Project_Description, Location_City, Location_Province]

EMPLOYEE [Employee_Firstname (PK), Employee_LastName (PK), Employee_Skill (PK), Employee_Rate]

EMPLOYEEWORK [Invoice_Num (PK, FK), Employee_Num (PK, FK), Employee_Work_Date, Employee_Bill_Hours]

EQUIPMENT [Equipment_ID (PK), Equipment_Description, Equipment_Rate]

EQUIPMENTUSE [Invoice_Num (PK, FK), Equipment_ID (PK, FK), Equipment_Used_Date, Equipment_Hours]

3NF:

CITY [City (PK), Province]
POSTAL [PostalCode (PK), City (FK)]

CUSTOMER [Customer_ID (PK), Customer_Name, Customer_Address, PostalCode (FK)]

PROJECT [Project_ID (PK), Project_Name, Project_Description, City (FK)]

INVOICE [Invoice_Num (PK), Invoice_Date, Customer_ID (FK), Project_ID (FK)]

EMPLOYEE [Employee_Num (PK), Employee_Firstname, Employee_LastName, Employee_Skill, Employee_Rate]

EMPLOYEEWORK [Invoice_Num (PK, FK), Employee_Num (PK, FK), Employee_Work_Date, Employee_Bill_Hours]

EQUIPMENT [Equipment_ID (PK), Equipment_Description, Equipment_Rate]

EQUIPMENTUSE [Invoice_Num (PK, FK), Equipment_ID (PK, FK), Equipment_Used_Date, Equipment_Hours]