**IPA- Assignment 1**

**Business Rules and Conceptual Model**

**Case 1 –Fix’em Equipment Maintenance Group LLC**

Your company is middle size handyman company and serving residence costumers only. You have a technical manger role in your company and your scheduling is not very efficient because there is no way to understand who has a skill(s) and what kind of them therefore it is very difficult to assign correct man for correct job. You decided to create scheduling solution that shows people with their skills

**Business Rules:**

Your business rules are very clear.

* The company has many technical people and some of them have multiple skills.
* The company also has many tools and equipment for technical people that is required to perform their job in field.
* Each job requested by costumer and performed by technician and tools.
* Each tool has special purpose and must be purchase from vendor who are certified by government.
* Company offers a wide range of repairs for only residence customers; Commercials are not included.
* Manager manages the technicians.
* One technical person should complete Task1 before going to Task2.
* Each technician is expertise of one or more tool.
* Each tool has at least one technician.
* Each job requested by customer should have at least one technician and tool.
* Vendor must have at least one tool.
* Vendor must be government certified.
* Manager manages at least one technician.
* Name, address, contact details of all technicians are mandatory.
* For every repair /fixing, work order is created.
* Payment information is also recorder for each transaction.

**Entities and Attributes:**

1. Customer

* CustomerID : *not null, unique*
* CustomerFirstName
* CustomerLastName
* Email
* PhoneNumber
* Address
* City
* State
* ZipCode

1. Department
   * DepartmentId, *not null, unique*
   * DepartmentName
   * DepartmentManager
2. Technician
   * TechnicianId, *not null, unique*
   * DepartmentId
   * TechnicianFirstName
   * TecnicianLastName
   * Email
   * PhoneNumber
   * Address
   * City
   * State
   * ZipCode
   * TechnicianPosition
   * SkillId
   * ToolId
3. Tools

* ToolId , *not null, unique*
* ToolName

1. Skills
   * SkillId, *not null, unique*
   * SkillName
2. Worklog
   * WorklogId , *not null, Unique*
   * TechnicianId
   * WorklogCategory
   * WorklogDuration
   * WorklogStatus
   * WorklogPayperhour
   * WorklogTotalpay
3. Bills
   * BillId, *not null ,Unique*
   * CustomerId
   * PaymentAmount
   * PaymentMethod
   * PaymentStatus
4. Order log table
   * OrderId, *not null, Unique*
   * CustomerId
   * TechnicianId

