Hannah Riedman Lab 2

```
select *
from Customers;
```

cid character	name text	city text	discount numeric ...
c001	Tiptop	Duluth	10
c002	Tyrell	Dallas	12
c003	Allied	Dallas	8
c004	ACME	Duluth	8.5
c005	Weyland	Risa	0
c006	ACME	Kyoto	0

```
select *
from Orders;
```

aid character	name text	city text	commissi... numeric ...
a01	Smith	New York	6.5
a02	Jones	Newark	6
a03	Perry	Tokyo	7
a04	Grey	New York	6
a05	Otasi	Duluth	5
a06	Smith	Dallas	5
a08	Bond	London	7.07

```
select *
from Products;
```

pid character	name text	city text	quantity integer	priceusd numeric (10,2)
p01	comb	Dallas	111400	0.5
p02	brush	Newark	203000	0.5
p03	razor	Duluth	150600	1
p04	pen	Duluth	125300	1
p05	pencil	Dallas	221400	1
p06	trapper	Dallas	123100	2
p07	case	Newark	100500	1
p08	eraser	Newark	200600	1.25

```
select *
from Agents;
```

ordnumber integer	month character	cid character	aid character	pid character	qty integer	totalusd numeric (12,2)
1011	Jan	c001	a01	p01	1000	450
1012	Jan	c002	a03	p03	1000	880
1015	Jan	c003	a03	p05	1200	1104
1016	Jan	c006	a01	p01	1000	500
1017	Feb	c001	a06	p03	600	540
1018	Feb	c001	a03	p04	600	540
1019	Feb	c001	a02	p02	400	180
1020	Feb	c006	a03	p07	600	600
1021	Feb	c004	a06	p01	1000	460
1022	Mar	c001	a05	p06	400	720
1023	Mar	c001	a04	p05	500	450
1024	Mar	c006	a06	p01	800	400
1025	Apr	c001	a05	p07	800	720
1026	May	c002	a05	p03	800	744

2. A primary key is a column or columns in a table that uniquely defines a row in that table. A candidate key is a column or columns that can be unique in a database. Any Candidate key can qualify as a primary key but there is only one primary key per table. A superkey is like a candidate key but it uses the minimum number of columns to identify a row.

3. A topic where you might need a table is an inventory for a pizza place. The table name can be Ingredients with the following columns: iid, name, QuantityLB, PriceLBUSD. IID (ingredientID) would contain integer data types and is not nullable (ex: 001). Name would contain string data types and would not be nullable(ex: Pepperoni). QuantityLB (quantity of ingredient per pound) would be an integer data type and would not be nullable(ex: 5). PriceLBUSD (price of ingredient pound per US dollar) would be integer data types and would not be nullable (ex: 10).

4.

a.The first normal form rule is when data is atomic meaning that there is no way you could divide them up more. An example of something that doesn't follow this rule is when you put a first and last name together under name, It can obviously be divided into first and last so you should not put them together. If you did there would not be consistency and it would be hard if you wanted to sort a list by last name vs first name because both of them would be together.

b.The access rows by content only is when you can only mention or call a row by what is in it. For example if you were to ask what information is in the 3rd row, that would be incorrect. You must instead ask what information is there about Billie Holiday, or whatever content you were trying to access. The reason for this is because databases have no order and can be sorted anyway you want. So to start numbering them is wrong and not following correct procedure.

c.The "all rows must be unique" rule is when you cannot duplicate data in rows because it will lead to data inconsistency. You especially should not have the same ID repeated in rows because it may lead to inconsistency when trying to mention a row by the content rather than where the row is.