**Normalization Exercise 4**

**First Normal Form**

Each cell has one value √

There are no multiple column issue (e.g., item1, item 2, item 3 columns) √

There is no primary key X

It seems an item always has the same price and tax, but it has different colors

(item, color)->(price, tax)

ORIGINALTABLE(item, color, price, tax)

**Second Normal Form**

Is this table in the second normal form? No because we have repeating data in price and tax columns.

According to this data, we can say that price and tax depend on item.

Item->(price, tax)

ITEM(item, price, tax)

ORIGINALTABLE(item, color)

**Third Normal Form**

Third normal form means that every column in a table should depend only on the primary key of a table. Put differently, there should be no transitive dependency.

Item-> tax (from second normal form)

Price->tax (common sense/data supports it)

TAX(price, tax)

ITEM(item, price)

ITEM\_COLOR(item, color)

1 ∞ ∞ 1

Tax

Assignment

ITEM