The order processing application was a little better than someone handwriting an order on paper. All input was created freehand by the application customer (user) which leaves potentially invalid inaccurate order if the part number was incorrect, didn’t match the part description, or if the price was not accurate. The only contact was via the email address if that was entered accurately.

Application thoughts:

Validation of input:

1. First name and last name: Required, alpha characters only (assuming no one has created a number for their name).
2. Email address: Required and should be valid for the accepted email format.
3. Order number: Numeric only, only a reference for the user and business if the printout is kept.
4. Order description: Alphanumeric, as it is really a note to the user.
5. Number of item(s): Required, numeric only, but what if the user changed their mind? Need a way to break the loop or confirm the user did not want to add more items (Ask user if order is complete?)

Loop order input:

1. Part number: Required, numeric(alphanumeric)
2. Part description: Required, alphanumeric, should match the part number(sorta because it is freehand).
3. Part cost: Required, numeric only but can the user create their own price?
4. Part quantity: Required, numeric only, user should know how many requested.
5. More input, user phone #, and a shipping address (if this order was created via web or printed and submitted by snail mail)

Out of scope, but future improvements (microservices):

Ideally, a database should be added for increased order accuracy (product/product description/price) the business to create all items available where the user can select via part number or search for the description. The database would have prices for the user to review. Inventory could be added to the database where the business can create, insert or update available products. If inventory count was added, the user can see quantity available and the business can deal with the count. Another thought, the user can create an account (saved and maintained in a database for user and or business reference) or be a guest account.