```
import pandas as pd
#create a dictionary for items
all_product = dict()


#function that takes in the new product name
def add_product():
    new_prod = dict()
    sub_prod = dict()
    prod_dt = []
    sale_pce = 0
    cos_prz = 0.25
    toil_prz = 0.15
    pas_prz = 0.10
    bev_prz = 0.125
    prod_des = ["product name", "category", "quantity", "unit cost", "sale prize"]
    prod_name = input("product name: ").lower()
    prod_dt.append(prod_name)
    category = input("product category: ").lower()
    prod_dt.append(category)
    quantity = int(input("input quantity to be added: "))
    prod_dt.append(quantity)
    unit_cost = float(input("input unit prize of each"))
    prod_dt.append(unit_cost)


    if prod_dt[1] == "cosmetics":
        sale_pce = unit_cost * cos_prz
        sale_pce = sale_pce + unit_cost
    elif prod_dt[1] == "toiletries":
        sale_pce = unit_cost * cos_prz
        sale_pce = sale_pce + unit_cost
    elif prod_dt[1] == "pastry":
        sale_pce = unit_cost * pas_prz
        sale_pce = sale_pce + unit_cost
    else:
        prod_dt[1] == "beverages"
        sale_pce = unit_cost * bev_prz
        sale_pce = sale_pce + unit_cost


    prod_dt.append(sale_pce)


    for prod, item in zip(prod_des, prod_dt):
        sub_prod[prod] = item
    new_prod[prod_name] = sub_prod
    return new_prod
```

```
def items_purchased():
    prod = []
    qnty = []
    all_item = []
    finish = 0
    final_prz = 0
    while finish == 0:
        prod_name = input("input product name").lower()
        if prod_name in all_product:
            item_purchase = []
            item_purchase.append(prod_name)
            quantity_purchased = int(input("quantity purchased"))
            item_purchase.append(quantity_purchased)
            if quantity_purchased > all_product[prod_name]["quantity"]:
                print(f"we do not have up to {quantity_purchased} {prod_name} in our iventory, please purschase less")
            else:
                quantity_purchased_prz = quantity_purchased * all_product[prod_name]["sale prize"]
                item_purchase.append(quantity_purchased_prz)
                all_product[prod_name]["quantity"] =  all_product[prod_name]["quantity"] - quantity_purchased
                final_prz += quantity_purchased_prz
                all_item.append(item_purchase)
                fnh = input("next product: (Yes or No)").lower()
                if fnh == "no":
                    finish = 1
                    tlt = []
                    tlt.append(f"Total {final_prz}")
                    all_item.append(tlt)
                else:
                    finish = 0
        else:
            print(f"{prod_name} not found in inventory")
            finish = 1
    return all_item



proddd = add_product()
all_product.update(proddd)
```

```
product name:  milo
product category:  beverages
input quantity to be added:  250
input unit prize of each 1500
```

```
df = pd.DataFrame(items_purchased())
df
```

```
input product name milo
quantity purchased 59
next product: (Yes or No) detol soap
input product name detol soap
quantity purchased 60
next product: (Yes or No) yes
input product name cocoa drink
quantity purchased 24
next product: (Yes or No) yes
input product name nivea
quantity purchased 30
next product: (Yes or No) no
```

	0	1	2
0	milo	59.0	99562.5
1	detol soap	60.0	4500.0
2	cocoa drink	24.0	5400.0
3	nivea	30.0	131250.0
4	Total 240712.5	NaN	NaN

```
print(all_product)
```

```
{'nivea': {'product name': 'nivea', 'category': 'cosmetics', 'quantity': 956, 'unit cost': 3500.0, 'sale prize': 4375.0}, 'cocoa drink': {'product name':
```