write a program to product id as key and dict as values with product details for inventory management systems

In [1]:
```
import datetime
import random
```

Using multi dimensional dictionary

In [2]:
```
# creating a list of dictionary of products
dct = { # product_id and product values
          1312:{'product_name':'Boult Earbuds',
                'product_category':'Electronics',
                'features':'13 mm drivers , waterproof , 40 hrs playb
                'price':499,
                'total':50
               },
          1322:{'product_name':'Acer Laptop',
                'product_category':'Electronics devices',
                'features':'512 SSD, windows 11 operating system , 4k
                'price':14999,
                'total':10
               },
          1332:{'product_name':'Nike Shoes',
                'product_category':'Shoes',
                'features':'stylish, comfy soles',
                'price':1499,
                'total':15
               },
          1342:{'product_name':'Gucci T-shirt',
                'product_category':'Clothing',
                'features':'comfy wear, full sleeves',
                'price':899,
                'total':25
               },
          1352:{'product_name':'Apple Watch',
                'product_category':'Wearables',
                'features':'heart-rate monitoring senor, 100 sports m
                'price':25499,
                'total':10
               }
}
```

checking the items in the dictionary

In [3]:
```
dct.keys()
```

Out[3]:
```
dict_keys([1312, 1322, 1332, 1342, 1352])
```

Consumer side

Adding new products

In [4]:
```
prod_key      = int(input("Enter the product key: "))
if prod_key in dct.keys():
    print('Product already exits in the Inventory ')
else:
    # inputs
    prod_name      = str(input("Enter product name: "))
    prod_category  = str(input("Enter product category :"))
    features       = str(input('Enter the features related to the pro
    price          = int(input("Enter the price : "))
    total          = int(input('Enter the total stocks available  : '


    # creating another dictionary
    prod = {}
    prod['product_name']      = prod_name.title()
    prod['product_category']  = prod_category
    prod['features']          = features
    prod['price']             = price
    prod['total']             = total


    # adding the key value pair to the main dictionary
    dct[prod_key] = prod
```

```
Enter the product key: 1239
Enter product name: boat headphones
Enter product category :electronics
Enter the features related to the product : lightweight, dynamic au
dio , deep bass, 13mm drivers
Enter the price : 1500
Enter the total stocks available  : 20
```

In [5]:
```
dct
```

Out[5]:
```
{1312: {'product_name': 'Boult Earbuds',
  'product_category': 'Electronics',
  'features': '13 mm drivers , waterproof , 40 hrs playback',
  'price': 499,
  'total': 50},
 1322: {'product_name': 'Acer Laptop',
  'product_category': 'Electronics devices',
  'features': '512 SSD, windows 11 operating system , 4k digital sc
reen',
  'price': 14999,
  'total': 10},
 1332: {'product_name': 'Nike Shoes',
  'product_category': 'Shoes',
  'features': 'stylish, comfy soles',
  'price': 1499,
  'total': 15},
 1342: {'product_name': 'Gucci T-shirt',
  'product_category': 'Clothing',
  'features': 'comfy wear, full sleeves',
  'price': 899,
  'total': 25},
 1352: {'product_name': 'Apple Watch',
  'product_category': 'Wearables',
  'features': 'heart-rate monitoring senor, 100 sports modes',
  'price': 25499,
  'total': 10},
 1239: {'product_name': 'Boat Headphones',
  'product_category': 'electronics',
  'features': 'lightweight, dynamic audio , deep bass, 13mm drivers
',
  'price': 1500,
  'total': 20}}
```

Searching based on Product_name

In [70]:
```
def search(dct, prod_name, quantity = 1):
    print('-' * 50 )
    for i in dct:
        if (prod_name.lower() == (dct[i]['product_name']).lower()) ar
            print('Product Name                    : ',dct[i]['product
            print('Category                        : ',dct[i]['product
            print('Quantity                        : ',quantity)
            print('Total amount                    :  Rs.',dct[i]['pri
            if dct[i]['total'] >= quantity :
                dct[i]['total'] = dct[i]['total'] - quantity
            else:
                print('-' * 50)
                print('Currently Not Available')
            print('-' * 50)
```

In [72]:
```
prod_name = str(input('Enter the product name : '))
search(dct,prod_name)
```

```
Enter the product name : apple watch
-------------------------------------------------
Product Name                    :  Apple Watch
Category                        :  Wearables
Quantity                        :  1
Total amount                    :  Rs. 25499
-------------------------------------------------
```

Searching based on incomplete product name

In [9]:
```
prod_name = str(input('Enter the product name :'))
print('-' * 50)
for i in dct:
    if (prod_name.lower() in (dct[i]['product_category']).lower()):
        print('Product Name : ',dct[i]['product_name'])
        print('Category     : ',dct[i]['product_category'])
        print('Price        :  Rs.',dct[i]['price'])
        print('-' * 50)
```

```
Enter the product name :a
-------------------------------------------------
Product Name :  Apple Watch
Category     :  Wearables
Price        :  Rs. 25499
-------------------------------------------------
```

Searching based on price range

In [8]:
```
p_range = int(input('Enter your price range : '))
print('-' * 50 )
for i in dct:
    if dct[i]['price'] <= p_range:
        print('Product Name : ',dct[i]['product_name'])
        print('Category     : ',dct[i]['product_category'])
        print('Price        :  Rs.',dct[i]['price'])
        print('-' * 50 )
```

```
Enter your price range : 500
-------------------------------------------------
Product Name :  Boult Earbuds
Category     :  Electronics
Price        :  Rs. 499
-------------------------------------------------
Product Name :  Boult Airbass
Category     :  earphones
Price        :  Rs. 500
-------------------------------------------------
```

product overview

In [13]:
```
# setting the delivery date
def del_date():
    t_day = datetime.date.today()
    tdelta = datetime.timedelta(days = random.randint(1,7))
    return (t_day + tdelta)

name     = input('Enter your name               : ')
address  = input('Enter your delivery address   : ')
print('-'*50)
for i in dct:
    if prod_name.lower() in dct[i]['product_name'].lower():
        print('Name of the product              : ',dct[i]['product_n
        print('Grand total                      : ',dct[i]['price'])
        print('Delivery address                 : ',address)
        print('date of delivery                 : ',del_date())
    print('-'*50)
```

```
Enter your name               : raju
Enter your delivery address   : juhu chaupati
--------------------------------------------------
Name of the product              :  Boult Earbuds
Grand total                      :  499
Delivery address                 :  juhu chaupati
date of delivery                 :  2023-02-17
--------------------------------------------------
Name of the product              :  Acer Laptop
Grand total                      :  14999
Delivery address                 :  juhu chaupati
date of delivery                 :  2023-02-20
--------------------------------------------------
Name of the product              :  Nike Shoes
Grand total                      :  1499
Delivery address                 :  juhu chaupati
date of delivery                 :  2023-02-20
--------------------------------------------------
--------------------------------------------------
Name of the product              :  Apple Watch
Grand total                      :  25499
Delivery address                 :  juhu chaupati
date of delivery                 :  2023-02-16
--------------------------------------------------
--------------------------------------------------
```

In [ ]:

In [ ]:

In [ ]: