```
In [2]:   products={1:{"product_name":"five star","price":10,"manufactured_date":12_3_2020,"expiry_date":23_9_2021,"quant
               2:{"product_name":"munch","price":5,"manufactured_date":11_4_2020,"expiry_date":2_5_2021,"quantity":2
               3:{"product_name":"perk","price":13,"manufactured_date":6_5_2020,"expiry_date":4_8_2021,"quantity":20
               4:{"product_name":"glucose","price":30,"manufactured_date":2_3_2020,"expiry_date":15_11_2021,"quantit
               5:{"product_name":"diary milk","price":10,"manufactured_date":12_3_2020,"expiry_date":15_11_2022,"qu
               6:{"product_name":"milky bar","price":30,"manufactured_date":23_6_2020,"expiry_date":15_11_2022,"quan
               7:{"product_name":"kit-kat","price":20,"manufactured_date":3_3_2020,"expiry_date":15_11_2022,"quantit
               8:{"product_name":"eclairs","price":5,"manufactured_date":24_3_2020,"expiry_date":9_7_2022,"quantity"
               9:{"product_name":"maha-lacto","price":5,"manufactured_date":4_3_2020,"expiry_date":6_8_2022,"quantit
               10:{"product_name":"5050","price":20,"manufactured_date":12_9_2020,"expiry_date":6_3_2020,"quantity":
               11:{"product_name":"butter biscuit","price":50,"manufactured_date":25_8_2020,"expiry_date":25_11_2022,
               12:{"product_name":"salt biscuit","price":40,"manufactured_date":23_6_2020,"expiry_date":14_11_2022,"
               13:{"product_name":"milky biscuit","price":10,"manufactured_date":5_6_2020,"expiry_date":29_9_2021,"e
               14:{"product_name":"marie gold","price":5,"manufactured_date":8_9_2020,"expiry_date":18_11_2022,"quan
               15:{"product_name":"lays","price":13,"manufactured_date":1_9_2020,"expiry_date":15_11_2022,"quantity"
               16:{"product_name":"kurkure","price":30,"manufactured_date":18_8_2020,"expiry_date":16_11_2022,"quant
               17:{"product_name":"cherry cake","price":45,"manufactured_date":3_8_2020,"expiry_date":15_10_2021,"qu
               18:{"product_name":"ghee biscuit","price":35,"manufactured_date":12_8_2021,"expiry_date":15_11_2022,"
               19:{"product_name":"milk shakthi","price":40,"manufactured_date":14_5_2021,"expiry_date":25_9_2022,"q
               20:{"product_name":"cream biscuit","price":10,"manufactured_date":16_9_2021,"expiry_date":19_11_2022,
               21:{"product_name":"tiger biscuit","price":5,"manufactured_date":15_10_2021,"expiry-date":15_11_2022,
               22:{"product_name":"vennila cake","price":20,"manufactured_date":10_4_2021,"expiry_date":10_11_2022,"
               23:{"product_name":"strawberry biscuit","price":45,"manufactured_date":14_10_2021,"expiry_date":18_11
               24:{"product_name":"butterscotch","price":5,"manufactured_date":14_10_2021,"expiry_date":14_11_2022,"
               25:{"product_name":"chocolate cake","price":20,"manufactured_date":13_3_2020,"expiry_date":9_9_2021,"
               26:{"product_name":"dark chocolate","price":30,"manufactured_date":14_10_2021,"expiry_date":15_11_202
               27:{"product_name":"lottee choco pie","price":13,"manufactured_date":8_11_2021,"expiry_date":25_11_20
               28:{"product_name":"dark fantasy","price":20,"manufactured_date":13_10_2021,"expiry_date":15_11_2022,
               29:{"product_name":"kinder-joy","price":34,"manufactured_date":17_10_2021,"expiry_date":15_11_2022,"q
               30:{"product_name":"crispello","price":12,"manufactured_date":14_10_2021,"expiry_date":12_11_2022,"qu
               }
```

```
In [3]:   print(products)
```

{1: {'product_name': 'five star', 'price': 10, 'manufactured_date': 1232020, 'expiry_date': 2392021, 'quantit
y': 100}, 2: {'product_name': 'munch', 'price': 5, 'manufactured_date': 1142020, 'expiry_date': 252021, 'quanti
ty': 200}, 3: {'product_name': 'perk', 'price': 13, 'manufactured_date': 652020, 'expiry_date': 482021, 'quanti
ty': 24}, 4: {'product_name': 'glucose', 'price': 30, 'manufactured_date': 232020, 'expiry_date': 15112021, 'qu
antity': 200}, 5: {'product_name': 'diary milk', 'price': 10, 'manufactured_date': 1232020, 'expiry_date': 1511
2022, 'quantity': 170}, 6: {'product_name': 'milky bar', 'price': 30, 'manufactured_date': 2362020, 'expiry_dat
e': 15112022, 'quantity': 45}, 7: {'product_name': 'kit-kat', 'price': 20, 'manufactured_date': 332020, 'expiry
_date': 15112022, 'quantity': 450}, 8: {'product_name': 'eclairs', 'price': 5, 'manufactured_date': 2432020, 'e
xpiry_date': 972022, 'quantity': 34}, 9: {'product_name': 'maha-lacto', 'price': 5, 'manufactured_date': 43202
0, 'expiry_date': 682022, 'quantity': 200}, 10: {'product_name': '5050', 'price': 20, 'manufactured_date': 1292
020, 'expiry_date': 632020, 'quantity': 240}, 11: {'product_name': 'butter biscuit', 'price': 50, 'manufactured
_date': 482020, 'expiry_date': 25112022, 'quantity': 20}, 12: {'product_name': 'salt biscuit', 'price': 40, 'ma
nufactured_date': 2362020, 'expiry_date': 14112022, 'quantity': 200}, 13: {'product_name': 'milky biscuit', 'pr
ice': 10, 'manufactured_date': 562020, 'expiry_date': 2992021, 'quantity': 140}, 14: {'product_name': 'marie go
ld', 'price': 5, 'manufactured_date': -1931, 'expiry_date': 18112022, 'quantity': 200}, 15: {'product_name': 'l
ays', 'price': 13, 'manufactured_date': 192020, 'expiry_date': 15112022, 'quantity': 24}, 16: {'product_name':
'kurkure', 'price': 30, 'manufactured_date': 1882020, 'expiry_date': 16112022, 'quantity': 200}, 17: {'product_
name': 'cherry cake', 'price': 45, 'manufactured_date': 382020, 'expiry_date': 15102021, 'quantity': 200}, 18:
{'product_name': 'ghee biscuit', 'price': 35, 'manufactured_date': 1282021, 'expiry_date': 15112022, 'quantit
y': 200}, 19: {'product_name': 'milk shakthi', 'price': 40, 'manufactured_date': 1452021, 'expiry_date': 259202
2, 'quantity': 28}, 20: {'product_name': 'cream biscuit', 'price': 10, 'manufactured_date': 1692021, 'expiry_da
te': 19112022, 'quantity': 20}, 21: {'product_name': 'tiger biscuit', 'price': 5, 'manufactured_date': 1510202
1, 'expiry-date': 15112022, 'quantity': 100}, 22: {'product_name': 'vennila cake', 'price': 20, 'manufactured_d
ate': 1042021, 'expiry_date': 10112022, 'quantity': 200}, 23: {'product_name': 'strawberry biscuit', 'price': 4
5, 'manufactured_date': 14102021, 'expiry_date': 18112022, 'quantity': 700}, 24: {'product_name': 'butterscotc
h', 'price': 5, 'manufactured_date': 14102021, 'expiry_date': 14112022, 'quantity': 200}, 25: {'product_name':
'chocolate cake', 'price': 20, 'manufactured_date': 1332020, 'expiry_date': 992021, 'quantity': 100}, 26: {'pro
duct_name': 'dark chocolate', 'price': 30, 'manufactured_date': 14102021, 'expiry_date': 15112022, 'quantity':
300}, 27: {'product_name': 'lottee choco pie', 'price': 13, 'manufactured_date': 8112021, 'expiry_date': 251120
22, 'quantity': 24}, 28: {'product_name': 'dark fantasy', 'price': 20, 'manufactured_date': 13102021, 'expiry_d
ate': 13112022, 'quantity': 100}, 29: {'product_name': 'kinder-joy', 'price': 34, 'manufactured_date': 1710202
1, 'expiry_date': 15112022, 'quantity': 209}, 30: {'product_name': 'crispello', 'price': 12, 'manufactured_dat
e': 14102021, 'expiry_date': 12112022, 'quantity': 250}}

```
In [19]:   type(products)
```

```
Out[19]:  dict
```

```
In [20]:   import json
```

```
In [21]:   js=json.dumps(products)
```

```
In [24]:   print(js)
```

{"1": {"product_name": "five star", "price": 10, "manufactured_date": 1232020, "expiry_date": 2392021, "quantit
y": 100}, "2": {"product_name": "munch", "price": 5, "manufactured_date": 1142020, "expiry_date": 252021, "quan
tity": 200}, "3": {"product_name": "perk", "price": 13, "manufactured_date": 652020, "expiry_date": 482021, "qu
antity": 24}, "4": {"product_name": "glucose", "price": 30, "manufactured_date": 232020, "expiry_date": 1511202
1, "quantity": 200}, "5": {"product_name": "diary milk", "price": 10, "manufactured_date": 1232020, "expiry_dat
e": 15112022, "quantity": 170}, "6": {"product_name": "milky bar", "price": 30, "manufactured_date": 2362020,
"expiry_date": 15112022, "quantity": 45}, "7": {"product_name": "kit-kat", "price": 20, "manufactured_date": 33
2020, "expiry_date": 15112022, "quantity": 450}, "8": {"product_name": "eclairs", "price": 5, "manufactured_dat
e": 2432020, "expiry_date": 972022, "quantity": 34}, "9": {"product_name": "maha-lacto", "price": 5, "manufactu
red_date": 432020, "expiry_date": 682022, "quantity": 200}, "10": {"product_name": "5050", "price": 20, "manufa
ctured_date": 1292020, "expiry_date": 632020, "quantity": 240}, "11": {"product_name": "butter biscuit", "pric
e": 50, "manufactured_date": 482020, "expiry_date": 25112022, "quantity": 20}, "12": {"product_name": "salt bis
cuit", "price": 40, "manufactured_date": 2362020, "expiry_date": 14112022, "quantity": 200}, "13": {"product_na
me": "milky biscuit", "price": 10, "manufactured_date": 562020, "expiry_date": 2992021, "quantity": 140}, "14":
{"product_name": "marie gold", "price": 5, "manufactured_date": -1931, "expiry_date": 18112022, "quantity": 20
0}, "15": {"product_name": "lays", "price": 13, "manufactured_date": 192020, "expiry_date": 15112022, "quantit
y": 24}, "16": {"product_name": "kurkure", "price": 30, "manufactured_date": 1882020, "expiry_date": 16112022,
"quantity": 200}, "17": {"product_name": "cherry cake", "price": 45, "manufactured_date": 382020, "expiry_dat
e": 15102021, "quantity": 200}, "18": {"product_name": "ghee biscuit", "price": 35, "manufactured_date": 128202
1, "expiry_date": 15112022, "quantity": 200}, "19": {"product_name": "milk shakthi", "price": 40, "manufactured
_date": 1452021, "expiry_date": 2592022, "quantity": 28}, "20": {"product_name": "cream biscuit", "price": 10,
"manufactured_date": 1692021, "expiry_date": 19112022, "quantity": 20}, "21": {"product_name": "tiger biscuit",
"price": 5, "manufactured_date": 15102021, "expiry-date": 15112022, "quantity": 100}, "22": {"product_name": "v
ennila cake", "price": 20, "manufactured_date": 1042021, "expiry_date": 10112022, "quantity": 200}, "23": {"pro
duct_name": "strawberry biscuit", "price": 45, "manufactured_date": 14102021, "expiry_date": 18112022, "quantit
y": 700}, "24": {"product_name": "butterscotch", "price": 5, "manufactured_date": 14102021, "expiry_date": 1411
2022, "quantity": 200}, "25": {"product_name": "chocolate cake", "price": 20, "manufactured_date": 1332020, "ex
piry_date": 992021, "quantity": 100}, "26": {"product_name": "dark chocolate", "price": 30, "manufactured_dat
e": 14102021, "expiry_date": 15112022, "quantity": 300}, "27": {"product_name": "lottee choco pie", "price": 1
3, "manufactured_date": 8112021, "expiry_date": 25112022, "quantity": 24}, "28": {"product_name": "dark fantas
y", "price": 20, "manufactured_date": 13102021, "expiry_date": 13112022, "quantity": 100}, "29": {"product_nam
e": "kinder-joy", "price": 34, "manufactured_date": 17102021, "expiry_date": 15112022, "quantity": 209}, "30":
{"product_name": "crispello", "price": 12, "manufactured_date": 14102021, "expiry_date": 12112022, "quantity":
250}}

```
In [25]:   type(js)
```

```
Out[25]:  str
```

```
In [32]:   fd=open("products.json",'w')
           fd.write(js)
           fd.close()
```

```
In [33]:   fd=open("products.json","r")
           txt=fd.read()
           fd.close()
```

```
In [35]:   txt
```

Out[35]:  '{"1": {"product_name": "five star", "price": 10, "manufactured_date": 1232020, "expiry_date": 2392021, "quanti
ty": 100}, "2": {"product_name": "munch", "price": 5, "manufactured_date": 1142020, "expiry_date": 252021, "qua
ntity": 200}, "3": {"product_name": "perk", "price": 13, "manufactured_date": 652020, "expiry_date": 482021, "q
uantity": 24}, "4": {"product_name": "glucose", "price": 30, "manufactured_date": 232020, "expiry_date": 151120
21, "quantity": 200}, "5": {"product_name": "diary milk", "price": 10, "manufactured_date": 1232020, "expiry_da
te": 15112022, "quantity": 170}, "6": {"product_name": "milky bar", "price": 30, "manufactured_date": 2362020,
"expiry_date": 15112022, "quantity": 45}, "7": {"product_name": "kit-kat", "price": 20, "manufactured_date": 33
2020, "expiry_date": 15112022, "quantity": 450}, "8": {"product_name": "eclairs", "price": 5, "manufactured_dat
e": 2432020, "expiry_date": 972022, "quantity": 34}, "9": {"product_name": "maha-lacto", "price": 5, "manufactu
red_date": 432020, "expiry_date": 682022, "quantity": 200}, "10": {"product_name": "5050", "price": 20, "manufa
ctured_date": 1292020, "expiry_date": 632020, "quantity": 240}, "11": {"product_name": "butter biscuit", "pric
e": 50, "manufactured_date": 482020, "expiry_date": 25112022, "quantity": 20}, "12": {"product_name": "salt bis
cuit", "price": 40, "manufactured_date": 2362020, "expiry_date": 14112022, "quantity": 200}, "13": {"product_na
me": "milky biscuit", "price": 10, "manufactured_date": 562020, "expiry_date": 2992021, "quantity": 140}, "14":
{"product_name": "marie gold", "price": 5, "manufactured_date": -1931, "expiry_date": 18112022, "quantity": 20
0}, "15": {"product_name": "lays", "price": 13, "manufactured_date": 192020, "expiry_date": 15112022, "quantit
y": 24}, "16": {"product_name": "kurkure", "price": 30, "manufactured_date": 1882020, "expiry_date": 16112022,
"quantity": 200}, "17": {"product_name": "cherry cake", "price": 45, "manufactured_date": 382020, "expiry_dat
e": 15102021, "quantity": 200}, "18": {"product_name": "ghee biscuit", "price": 35, "manufactured_date": 128202
1, "expiry_date": 15112022, "quantity": 200}, "19": {"product_name": "milk shakthi", "price": 40, "manufactured
_date": 1452021, "expiry_date": 2592022, "quantity": 28}, "20": {"product_name": "cream biscuit", "price": 10,
"manufactured_date": 1692021, "expiry_date": 19112022, "quantity": 20}, "21": {"product_name": "tiger biscuit",
"price": 5, "manufactured_date": 15102021, "expiry-date": 15112022, "quantity": 100}, "22": {"product_name": "v
ennila cake", "price": 20, "manufactured_date": 1042021, "expiry_date": 10112022, "quantity": 200}, "23": {"pro
duct_name": "strawberry biscuit", "price": 45, "manufactured_date": 14102021, "expiry_date": 18112022, "quantit
y": 700}, "24": {"product_name": "butterscotch", "price": 5, "manufactured_date": 14102021, "expiry_date": 1411
2022, "quantity": 200}, "25": {"product_name": "chocolate cake", "price": 20, "manufactured_date": 1332020, "ex
piry_date": 992021, "quantity": 100}, "26": {"product_name": "dark chocolate", "price": 30, "manufactured_dat
e": 14102021, "expiry_date": 15112022, "quantity": 300}, "27": {"product_name": "lottee choco pie", "price": 1
3, "manufactured_date": 8112021, "expiry_date": 25112022, "quantity": 24}, "28": {"product_name": "dark fantas
y", "price": 20, "manufactured_date": 13102021, "expiry_date": 13112022, "quantity": 100}, "29": {"product_nam
e": "kinder-joy", "price": 34, "manufactured_date": 17102021, "expiry_date": 15112022, "quantity": 209}, "30":
{"product_name": "crispello", "price": 12, "manufactured_date": 14102021, "expiry_date": 12112022, "quantity":
250}}'

```
In [36]:   products = json.loads(txt)
```

```
In [37]:   products["1"]
```

```
Out[37]:  {'product_name': 'five star',
           'price': 10,
           'manufactured_date': 1232020,
           'expiry_date': 2392021,
           'quantity': 100}
```

```
In [38]:   import time
           time.ctime()
```

```
Out[38]:  'Sun Sep  5 16:35:45 2021'
```