```
rd={100:{"name":"cadbury silk","category":"chocolates","expiry ":"12 months","quantity":10,
   101:{"name":"eclairs","category":"candy","expiry ":"6 months","quantity":20,"prize":2},
   102:{"name":"coca cola","category":"cold drinks","expiry":"18 months","quantity":15,"pr
   103:{"name":"5 star","category":"chocolates","expiry ":"12 months","quantity":10,"prize 104:{"name":"chocolairs","category":"candy","expiry ":"6 months","quantity":20,"prize":
   105:{"name":"limca","category":"cold drinks","expiry":"18 months","quantity":15,"prize'
   106:{"name":"licabils","category":"chocolates","expiry ":"12 months","quantity":10,"pri
   107:{"name":"coconut","category":"candy","expiry ":"6 months","quantity":20,"prize":2},
   108:{"name":"fanta","category":"cold drinks","expiry":"18 months","quantity":15,"prize'
   109:{"name":"fruit&nut","category":"chocolates","expiry ":"12 months","quantity":10,"pr
   110:{"name":"just jelly","category":"candy","expiry ":"6 months","quantity":20,"prize":
   111:{"name":"sprite","category":"cold drinks","expiry":"18 months","quantity":15,"prize
   112:{"name":"milky bar","category":"chocolates","expiry ":"12 months","quantity":10,"pr
   113:{"name":"gems","category":"candy","expiry ":"6 months","quantity":20,"prize":2},
   114:{"name":"campa cola","category":"cold drinks","expiry":"18 months","quantity":15,"
   115:{"name":"dairy milk","category":"chocolates","expiry ":"12 months","quantity":10,"
   116:{"name":"shots","category":"candy","expiry ":"6 months","quantity":20,"prize":2},
   117:{"name":"lemon","category":"cold drinks","expiry":"18 months","quantity":15,"prize'
   118:{"name":"oreo","category":"chocolates","expiry ":"12 months","quantity":10,"prize":
   119:{"name":"pulse","category":"candy","expiry ":"6 months","quantity":20,"prize":2},
   120:{"name":"coca","category":"cold drinks","expiry":"18 months","quantity":15,"prize":
   121:{"name":"cadbury celebrations","category":"chocolates","expiry ":"12 months","quant
   122:{"name":"bomber","category":"candy","expiry ":"6 months","quantity":20,"prize":2},
   123:{"name":"litchi","category":"cold drinks","expiry":"18 months","quantity":15,"prize
   124:{"name":"protein bar","category":"chocolates","expiry ":"12 months","quantity":10,'
   125:{"name":"jelly","category":"candy","expiry ":"6 months","quantity":20,"prize":2},
126:{"name":"marinda","category":"cold drinks","expiry":"18 months","quantity":15,"priz
   127:{"name":"nuts","category":"chocolates","expiry ":"12 months","quantity":10,"prize":
   128:{"name":"chew","category":"candy","expiry ":"6 months","quantity":20,"prize":2},
   129:{"name":"mountain dew","category":"cold drinks","expiry":"18 months","quantity":15,
   130:{"name":"nestle","category":"chocolates","expiry ":"12 months","quantity":10,"prize
t(record)
      {100: {'name': 'cadbury silk', 'category': 'chocolates', 'expiry ': '12 months'
record[100]
      {'category': 'chocolates',
       'expiry ': '12 months',
       'name': 'cadbury silk',
       'prize': 80,
       'quantity': 10}
```

json record

```
import json
js=json.dumps(record)
```

'{"100": {"name": "cadbury silk", "category": "chocolates", "expiry ": "12 mont hs", "quantity": 10, "prize": 80}, "101": {"name": "eclairs", "category": "cand y", "expiry ": "6 months", "quantity": 20, "prize": 2}, "102": {"name": "coca c ola", "category": "cold drinks", "expiry": "18 months", "quantity": 15, "priz e": 20}, "103": {"name": "5 star", "category": "chocolates", "expiry ": "12 mon ths", "quantity": 10, "prize": 80}, "104": {"name": "chocolairs", "category": "candy", "expiry ": "6 months", "quantity": 20, "prize": 2}, "105": {"name": "limca", "category": "cold drinks", "expiry": "18 months", "quantity": 15, "priz e": 20}, "106": {"name": "licabils", "category": "chocolates", "expiry ": "12 m onths", "quantity": 10, "prize": 80}, "107": {"name": "coconut", "category": "c andy", "expiry ": "6 months", "quantity": 20, "prize": 2}, "108": {"name": "fanta", "category": "cold drinks", "expiry": "18 months", "quantity": 15, "prize": 20}, "109": {"name": "fruit&nut", "category": "chocolates", "expiry ": "12 mont hs", "quantity": 10, "prize": 80}, "110": {"name": "just jelly", "category": "c andy", "expiry ": "6 months", "quantity": 20, "prize": 2}, "111": {"name": "spr ite", "category": "cold drinks", "expiry": "18 months", "quantity": 15, "priz e": 20}, "112": {"name": "milky bar", "category": "chocolates", "expiry ": "12 months", "quantity": 10, "prize": 80}, "113": {"name": "gems", "category": "can dy", "expiry ": "6 months", "quantity": 20, "prize": 2}, "114": {"name": "campa cola", "category": "cold drinks", "expiry": "18 months", "quantity": 15, "priz e": 20}, "115": {"name": "dairy milk", "category": "chocolates", "expiry ": "12 months", "quantity": 10, "prize": 80}, "116": {"name": "shots", "category": "ca ndy", "expiry ": "6 months", "quantity": 20, "prize": 2}, "117": {"name": "lemo n", "category": "cold drinks", "expiry": "18 months", "quantity": 15, "prize": 20}, "118": {"name": "oreo", "category": "chocolates", "expiry ": "12 months", "quantity": 10, "prize": 80}, "119": {"name": "pulse", "category": "candy", "expiry ": "6 months", "quantity": 20, "prize": 2}, "120": {"name": "coca", "category": "category": "category": "category": "category": "category": "category": "coca", "category": "category": "coca", "category": "coca", "category": "category": "coca", "category": "category: "cat ory": "cold drinks", "expiry": "18 months", "quantity": 15, "prize": 20}, "12 1": {"name": "cadbury celebrations", "category": "chocolates", "expiry ": "12 m onths", "quantity": 10, "prize": 80}, "122": {"name": "bomber", "category": "ca ndy", "expiry ": "6 months", "quantity": 20, "prize": 2}, "123": {"name": "litc "category": "cold drinks", "expiry": "18 months", "quantity": 15, "prize": 20}, "124": {"name": "protein bar", "category": "chocolates", "expiry ": "12 mo nths", "quantity": 10, "prize": 80}, "125": {"name": "jelly", "category": "cand y", "expiry ": "6 months", "quantity": 20, "prize": 2}, "126": {"name": "marind a", "category": "cold drinks", "expiry": "18 months", "quantity": 15, "prize": 20}, "127": {"name": "nuts", "category": "chocolates", "expiry ": "12 months", "quantity": 10, "prize": 80}, "128": {"name": "chew", "category": "candy", "exp iry ": "6 months", "quantity": 20, "prize": 2}, "129": {"name": "mountain dew", "category": "cold drinks", "expiry": "18 months", "quantity": 15, "prize": 20}, "130": {"name": "nestle", "category": "chocolates", "expiry ": "12 months", "qu antity": 10, "prize": 80}}⟨ ' □

```
fd=open("record.json","w")
fd.write(js)
fd.close()

fd=open("record.json","r")
txt=fd.read()
fd.close()

fd = open("record.txt",'w')
fd.write(js)
fd.close()
fd = open("record.txt",'r')
txt = fd.read()
fd.close()
```

'{"100": {"name": "cadbury silk", "category": "chocolates", "expiry ": "12 mont ", "quantity": 10, "prize": 80}, "101": {"name": "eclairs", "category": "cand y", "expiry ": "6 months", "quantity": 20, "prize": 2}, "102": {"name": "coca c ola", "category": "cold drinks", "expiry": "18 months", "quantity": 15, "priz e": 20}, "103": {"name": "5 star", "category": "chocolates", "expiry ": "12 mon ths", "quantity": 10, "prize": 80}, "104": {"name": "chocolairs", "category": "candy", "expiry ": "6 months", "quantity": 20, "prize": 2}, "105": {"name": "limca", "category": "cold drinks", "expiry": "18 months", "quantity": 15, "priz e": 20}, "106": {"name": "licabils", "category": "chocolates", "expiry ": "12 m onths", "quantity": 10, "prize": 80}, "107": {"name": "coconut", "category": "c andy", "expiry ": "6 months", "quantity": 20, "prize": 2}, "108": {"name": "fan ta", "category": "cold drinks", "expiry": "18 months", "quantity": 15, "prize": 20}, "109": {"name": "fruit&nut", "category": "chocolates", "expiry ": "12 mont hs", "quantity": 10, "prize": 80}, "110": {"name": "just jelly", "category": "c andy", "expiry ": "6 months", "quantity": 20, "prize": 2}, "111": {"name": "spr ite", "category": "cold drinks", "expiry": "18 months", "quantity": 15, "priz e": 20}, "112": {"name": "milky bar", "category": "chocolates", "expiry ": "12 months", "quantity": 10, "prize": 80}, "113": {"name": "gems", "category": "can dy", "expiry ": "6 months", "quantity": 20, "prize": 2}, "114": {"name": "campa cola", "category": "cold drinks", "expiry": "18 months", "quantity": 15, "priz e": 20}, "115": {"name": "dairy milk", "category": "chocolates", "expiry ": "12 months", "quantity": 10, "prize": 80}, "116": {"name": "shots", "category": "ca ndy", "expiry ": "6 months", "quantity": 20, "prize": 2}, "117": {"name": "lemo n", "category": "cold drinks", "expiry": "18 months", "quantity": 15, "prize": 20}, "118": {"name": "oreo", "category": "chocolates", "expiry ": "12 months", "quantity": 10, "prize": 80}, "119": {"name": "pulse", "category": "candy", "expiry ": "6 months", "quantity": 20, "prize": 2}, "120": {"name": "coca", "category": "category: ory": "cold drinks", "expiry": "18 months", "quantity": 15, "prize": 20}, "12 1": {"name": "cadbury celebrations", "category": "chocolates", "expiry ": "12 m onths", "quantity": 10, "prize": 80}, "122": {"name": "bomber", "category": "ca ndy", "expiry ": "6 months", "quantity": 20, "prize": 2}, "123": {"name": "litc "category": "cold drinks", "expiry": "18 months", "quantity": 15, "prize": 20}, "124": {"name": "protein bar", "category": "chocolates", "expiry ": "12 mo nths", "quantity": 10, "prize": 80}, "125": {"name": "jelly", "category": "cand y", "expiry ": "6 months", "quantity": 20, "prize": 2}, "126": {"name": "marind a", "category": "cold drinks", "expiry": "18 months", "quantity": 15, "prize": 20}, "127": {"name": "nuts", "category": "chocolates", "expiry ": "12 months", "quantity": 10, "prize": 80}, "128": {"name": "chew", "category": "candy", "exp iry ": "6 months", "quantity": 20, "prize": 2}, "129": {"name": "mountain dew", "category": "cold drinks", "expiry": "18 months", "quantity": 15, "prize": 20}, "130": {"name": "nestle", "category": "chocolates", "expiry ": "12 months", "qu antity": 10, "prize": 80}}⊲' **□**

```
record=json.loads(txt)
record
         expriy . o months ,
'name': 'pulse',
         'prize': 2,
         'quantity': 20},
        '120': {'category': 'cold drinks',
         'expiry': '18 months',
'name': 'coca',
         'prize': 20,
         'quantity': 15},
        '121': {'category': 'chocolates',
         'expiry ': '12 months',
'name': 'cadbury celebrations',
         'prize': 80,
         'quantity': 10},
        '122': {'category': 'candy',
         'expiry ': '6 months',
'name': 'bomber',
         'prize': 2,
         'quantity': 20},
        '123': {'category': 'cold drinks',
         'expiry': '18 months',
'name': 'litchi',
         'prize': 20,
         'quantity': 15},
        '124': {'category': 'chocolates',
         'expiry ': '12 months',
'name': 'protein bar',
         'prize': 80,
         'quantity': 10},
        11751. Plantagaryle landyl
```

```
123 . 1 calegory . carry ,
 'expiry ': '6 months',
'name': 'jelly',
 'prize': 2,
 'quantity': 20},
'126': {'category': 'cold drinks',
 'expiry': '18 months',
'name': 'marinda',
 'prize': 20,
 'quantity': 15},
'127': {'category': 'chocolates',
 'expiry ': '12 months',
'name': 'nuts',
 'prize': 80,
 'quantity': 10},
'128': {'category': 'candy',
 'expiry ': '6 months',
 'name': 'chew',
 'prize': 2,
 'quantity': 20},
'129': {'category': 'cold drinks',
 'expiry': '18 months',
'name': 'mountain dew',
 'prize': 20,
 'quantity': 15},
'130': {'category': 'chocolates',
 'expiry ': '12 months',
'name': 'nestle',
 'prize': 80,
 'quantity': 10}}
```

- time

```
import time

time.ctime()
    'Sun Sep 5 11:13:51 2021'

type(record)
    dict

record.values()
    dict_values([{'name': 'cadbury silk', 'category': 'chocolates', 'expiry ': '12}

c1_key=input("enter key:")
c1=input("enter quantity:")
```

```
enter key:130
      enter quantity:5
record[130]
       {'category': 'chocolates',
        'expiry ': '12 months',
'name': 'nestle',
        'prize': 80,
        'quantity': 10}
 Double-click (or enter) to edit
c1
       '5'
q1=record[130]['quantity']-int(c1)
q1
      5
record[130]['quantity']=q1
record[130]
      {'category': 'chocolates',
  'expiry ': '12 months',
  'name': 'nestle',
        'prize': 80,
        'quantity': 5}
c1_bill=int(c1)*record[130]['prize']
c1_bill
      400
c2_key=input("enter key:")
      enter key:110
c2=input("enter quantity:")
      enter quantity:2
```

```
q2=record[110]['quantity']-int(c2)
q2
       18
record[110]['quantity']=q2
record[110]
       {'category': 'candy',
 'expiry ': '6 months',
 'name': 'just jelly',
        'prize': 2,
        'quantity': 18}
c2_bill=record[110]['prize']*int(c2)
c2_bill
       4
c3_key=input("enter key:")
c3=input("enter quantity:")
       enter key:100
       enter quantity:5
record[100]
       {'category': 'chocolates',
  'expiry ': '12 months',
  'name': 'cadbury silk',
        'prize': 80,
        'quantity': 10}
q3=record[100]['quantity']-int(c3)
record[100]['quantity']=q3
record[100]
       {'category': 'chocolates',
        'expiry ': '12 months',
'name': 'cadbury silk',
        'prize': 80,
        'quantity': 5}
```

```
c3_bill=record[100]['prize']*int(c3)
c3_bill
      400
record.values()
     dict_values([{'name': 'cadbury silk', 'category': 'chocolates', 'expiry ': '12
record.keys()
    115, 116, 117, 118, 119, 120, 121, 122, 123, 124, 125, 126, 127, 128, 129, 130])
c4_key=input("enter key:")
c4=input("enter quantity:")
     enter key:116
      enter quantity:4
с4
      '4'
record[116]
     {'category': 'candy',
  'expiry ': '6 months',
       'name': 'shots',
       'prize': 2,
       'quantity': 20}
q4=record[116]['quantity']-int(c4)
record[116]['quantity']=q4
record[116]
      {'category': 'candy',
       'expiry ': '6 months',
'name': 'shots',
       'prize': 2,
       'quantity': 16}
c4_bill=record[116]['prize']*int(c4)
c4_bill
```

record

```
expiry . o months , 'name': 'pulse',
 'prize': 2,
 'quantity': 20},
120: {'category': 'cold drinks',
 'expiry': '18 months',
 'name': 'coca',
 'prize': 20,
 'quantity': 15},
121: {'category': 'chocolates',
 'expiry ': '12 months',
 'name': 'cadbury celebrations',
 'prize': 80,
 'quantity': 10},
122: {'category': 'candy',
 'expiry ': '6 months',
'name': 'bomber',
 'prize': 2,
 'quantity': 20},
123: {'category': 'cold drinks',
 'expiry': '18 months',
'name': 'litchi',
 'prize': 20,
 'quantity': 15},
124: {'category': 'chocolates',
 'expiry ': '12 months',
'name': 'protein bar',
 'prize': 80,
 'quantity': 10},
125: {'category': 'candy',
 'expiry ': '6 months',
'name': 'jelly',
 'prize': 2,
 'quantity': 20},
126: {'category': 'cold drinks',
 'expiry': '18 months',
 'name': 'marinda',
 'prize': 20,
 'quantity': 15},
127: {'category': 'chocolates',
 'expiry ': '12 months',
 'name': 'nuts',
 'prize': 80,
 'quantity': 10},
128: {'category': 'candy',
 'expiry ': '6 months',
 'name': 'chew',
 'prize': 2,
 'quantity': 20},
129: {'category': 'cold drinks',
 'expiry': '18 months',
 'name': 'mountain dew',
 'prize': 20,
```

```
'quantity': 15},
130: {'category': 'chocolates',
    'expiry ': '12 months',
    'name': 'nestle',
    'prize': 80,
    'quantity': 5}}

js=json.dumps(record)
```

'{"100": {"name": "cadbury silk", "category": "chocolates", "expiry ": "12 mont ", "quantity": 5, "prize": 80}, "101": {"name": "eclairs", "category": "cand y", "expiry ": "6 months", "quantity": 20, "prize": 2}, "102": {"name": "coca c ola", "category": "cold drinks", "expiry": "18 months", "quantity": 15, "priz e": 20}, "103": {"name": "5 star", "category": "chocolates", "expiry ": "12 mon ths", "quantity": 10, "prize": 80}, "104": {"name": "chocolairs", "category": "candy", "expiry ": "6 months", "quantity": 20, "prize": 2}, "105": {"name": "limca", "category": "cold drinks", "expiry": "18 months", "quantity": 15, "priz e": 20}, "106": {"name": "licabils", "category": "chocolates", "expiry ": "12 m onths", "quantity": 10, "prize": 80}, "107": {"name": "coconut", "category": "c andy", "expiry ": "6 months", "quantity": 20, "prize": 2}, "108": {"name": "fan ta", "category": "cold drinks", "expiry": "18 months", "quantity": 15, "prize": 20}, "109": {"name": "fruit&nut", "category": "chocolates", "expiry ": "12 mont hs", "quantity": 10, "prize": 80}, "110": {"name": "just jelly", "category": "c andy", "expiry ": "6 months", "quantity": 18, "prize": 2}, "111": {"name": "spr ite", "category": "cold drinks", "expiry": "18 months", "quantity": 15, "priz e": 20}, "112": {"name": "milky bar", "category": "chocolates", "expiry ": "12 months", "quantity": 10, "prize": 80}, "113": {"name": "gems", "category": "can dy", "expiry ": "6 months", "quantity": 20, "prize": 2}, "114": {"name": "campa cola", "category": "cold drinks", "expiry": "18 months", "quantity": 15, "priz e": 20}, "115": {"name": "dairy milk", "category": "chocolates", "expiry ": "12 months", "quantity": 10, "prize": 80}, "116": {"name": "shots", "category": "ca ndy", "expiry ": "6 months", "quantity": 20, "prize": 2}, "117": {"name": "lemo n", "category": "cold drinks", "expiry": "18 months", "quantity": 15, "prize": 20}, "118": {"name": "oreo", "category": "chocolates", "expiry ": "12 months", "quantity": 10, "prize": 80}, "119": {"name": "pulse", "category": "candy", "expiry ": "6 months", "quantity": 20, "prize": 2}, "120": {"name": "coca", "category": "category: "cat ory": "cold drinks", "expiry": "18 months", "quantity": 15, "prize": 20}, "12 1": {"name": "cadbury celebrations", "category": "chocolates", "expiry ": "12 m onths", "quantity": 10, "prize": 80}, "122": {"name": "bomber", "category": "ca ndy", "expiry ": "6 months", "quantity": 20, "prize": 2}, "123": {"name": "litc "category": "cold drinks", "expiry": "18 months", "quantity": 15, "prize": 20}, "124": {"name": "protein bar", "category": "chocolates", "expiry ": "12 mo nths", "quantity": 10, "prize": 80}, "125": {"name": "jelly", "category": "cand y", "expiry ": "6 months", "quantity": 20, "prize": 2}, "126": {"name": "marind a", "category": "cold drinks", "expiry": "18 months", "quantity": 15, "prize": 20}, "127": {"name": "nuts", "category": "chocolates", "expiry ": "12 months", "quantity": 10, "prize": 80}, "128": {"name": "chew", "category": "candy", "exp iry ": "6 months", "quantity": 20, "prize": 2}, "129": {"name": "mountain dew", "category": "cold drinks", "expiry": "18 months", "quantity": 15, "prize": 20}, "130": {"name": "nestle", "category": "chocolates", "expiry ": "12 months", "qu antity": 5, "prize": 80}}⊲' **□**

total products

```
total_products_sold=int(c1)+int(c2)+int(c3)+int(c4)

total_products_sold

16
```

total sales amount

```
total_sales_amount=int(c1_bill)+int(c2_bill)+int(c3_bill)+int(c4_bill)
total_sales_amount
812
```

→ ADDING NEW PRODUCT

enter category:Chocolates

```
key=str(input("enter the product key:"))
name=str(input("enter name:"))
category=str(input("enter category:"))
expiry=input("enter expiry:")
quantity=input("enter quantity:")
prize=input("enter prize:")

record[key]={"name":name,"category":category,"expiry":expiry,"quantity":quantity,"prize":p

js=json.dumps(record)

fd=open("record.json","w")

fd.write(js)

fd.close()
    enter the product key:100
    enter name:Cadbury silk
```

```
enter expiry:12 months
      enter quantity:50
      enter prize:80
record[100]["quantity"]=quantity
record
      {100: {'category': 'chocolates',
        'expiry ': '12 months',
        'name': 'cadbury silk',
        'prize': 80,
        'quantity': '50'},
       '100': {'category': 'Chocolates',
        'expiry': '12 months',
        'name': 'Cadbury silk',
'prize': '80',
        'quantity': '50'},
       101: {'category': 'candy',
        'expiry ': '6 months',
        'name': 'eclairs',
        'prize': 2,
        'quantity': 20},
       102: {'category': 'cold drinks',
        'expiry': '18 months',
        'name': 'coca cola',
        'prize': 20,
        'quantity': 15},
       103: {'category': 'chocolates',
        'expiry ': '12 months',
        'name': '5 star',
        'prize': 80,
        'quantity': 10},
       104: {'category': 'candy',
        'expiry ': '6 months',
        'name': 'chocolairs',
        'prize': 2,
        'quantity': 20},
       105: {'category': 'cold drinks',
        'expiry': '18 months',
'name': 'limca',
        'prize': 20,
        'quantity': 15},
       106: {'category': 'chocolates',
        'expiry ': '12 months',
'name': 'licabils',
        'prize': 80,
        'quantity': 10},
       107: {'category': 'candy',
        'expiry ': '6 months',
'name': 'coconut',
        'prize': 2,
        'quantity': 20},
       108: {'category': 'cold drinks',
```

'expiry': '18 months',