# DSA LAB 1

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MARCH 7, 2022

# 11.5 Exercises

1. Write a program that repeatedly asks the user to enter product names and prices. Store all of these in a dictionary whose keys are the product names and whose values are the prices. When the user is done entering products and prices, allow them to repeatedly enter a product name and print the corresponding price or a message if the product is not in the dictionary.

## Discussion:

- This code takes elements of a list and places them in a dictionary in a key-value pair. Users can enter exit if they want to exit the program. Furthermore, users can enter a value, and the list will check and return how many products are under that price.

Code:

```
print("Enter your Product Items and their Price, when done enter 'exit' ")
shop={
}
product_list=[]
price_list=[]
for i in range(20):

    product=input('Enter Product Name')
    if product=='exit':
        break
    product_list.append(product)
    price=int(input('Enter Price in usd'))
    price_list.append(price)
    shop[product_list[i]]=price_list[i]
print(shop)
price_usd=input("Enter dollar amount")
#print(*shop) # prints all the keys
'''product_list=['a','b','c']
price_list=[1,2,3]'''
for i in range(len(product_list)):
    if price_list[i]<price_usd:
        print(product_list[i])
```

**Output**

```
PS C:\Users\Hamza\Desktop\Python\Assignment1>  c:; cd 'c:\Users\Hamza\Desk
rograms\Python\Python39\python.exe' 'c:\Users\Hamza\.vscode\extensions\ms-
Enter Price in usd 2.99
Enter Product Name sugar
Enter Price in usd 1.99
Enter Product Name butter
Enter Price in usd4.99
Enter Product Name Cake
Enter Price in usd11.99
Enter Product Nameexit
{' milk': 2.99, ' sugar ': 1.99, ' butter ': 4.99, ' Cake ': 11.99}
Enter dollar amount10
 milk
 sugar
 butter
PS C:\Users\Hamza\Desktop\Python\Assignment1> []
```

## 7.7 Exercises

Q1. Write a program that asks the user to enter a list of integers. Do the following:

(a) Print the total number of items in the list.
(b) Print the last item in the list.
(c) Print the list in reverse order.
(d) Print Yes if the list contains a 5 and No otherwise.
(e) Print the number of fives in the list.
(f) Remove the first and last items from the list, sort the remaining items, and print the result.
(g) Print how many integers in the list are less than 5.

## Discussion:

- In this program elements of the list are checked, counted and reversed accordingly.

```python
l=[1,2,3,4,5,5,5]
Times=0
for i in range(len(l)):
    if l[i]==5:
        Times=Times+1
if Times>0:
    print('yes')
else:
    print('no')
print('Five is Present for these many times ', Times)
r=len(l)+1
e=[]
for i in range(1,r):
    print(l[-i])
    e.append(l[-i])

print('Reverse list is', e)
#
```

Output:

```
-#1'
PS C:\Users\Hamza>  c:; cd 'c:\Users\Hamza\Desktop
thon\Python39\python.exe' 'c:\Users\Hamza\.vscode\
hon\debugpy\launcher' '60689' '--' 'c:\Users\Hamza
yes
Five is Present for these many times  3
5
5
5
4
3
2
1
Reverse list is [5, 5, 5, 4, 3, 2, 1]
PS C:\Users\Hamza\Desktop\Python\Assignment1>
```