Write a Python program to create and display all combinations of letters, selecting each letter from a different key in a dictionary.

```
from itertools import product

di={"A":[1,2,3],"B":[3,4,5],"C":[4,5,6],"D":[5,7,6],"E":[8,9,9]}

for i in di.items():

    print(i)
```

Write a Python program to split a list every Nth element.

```
li=[]

for i in range(1,11):

    li.append(i)

print(li)

slices=[]

for j in range(0,len(li),3):

    slices.append(li[j:j+3])

print(slices)
```

Write a Python program to compute the difference between two lists.

```
li1=[23,44,55,66,77]

li2=[56,77,88,99]

li3=[]

for i in li1:

    for j in li2:

        diff=i-j

        li3.append(diff)

s=set(li3)
```

```
li4=list(s)
li4
#Write a Python program to replace the last element in a list with another list
Sample_data=[1,3,5,7,9,10],[2,4, 6,8]
n=Sample_data[0][:-1]+Sample_data[1]
n
# Write a Python program to insert a given string at the beginning of all items in a list.
num = [1,2,3,4]
print(['emp{0}'.format(i) for i in  num])
# Write a Python program to check whether all dictionaries in a list are empty or not
dic={}
if len(dic)<=1:
    print("dictionaris is empty")
else:
    print("its not empty")
# Write a Python program to pack consecutive duplicates of a given list elements into sublists
def pack_duplicates(lst):
    result = []
    for item in lst:
        if not result or item != result[-1][-1]:
            result.append([item])
        else:
            result[-1].append(item)
    return result
```

```
# Example usage

my_list = [1, 1, 2, 3, 3, 3, 4, 4, 5]


packed_list = pack_duplicates(my_list)

print(packed_list)
```

Write a Python program to create a list reflecting the run-length encoding from a given list of integers or a given list of characters.

```
seq="AACCBBBBBCCCDDEEFFFFFFFFF"

count=1

char= seq[0]

c=[]

for i in range(1,len(seq)):
    if seq[i] == char:
        count+=i
    else:
        c.append([char,count])
        char = seq[i]
        count=1
    c.append([char])
print(c)
```