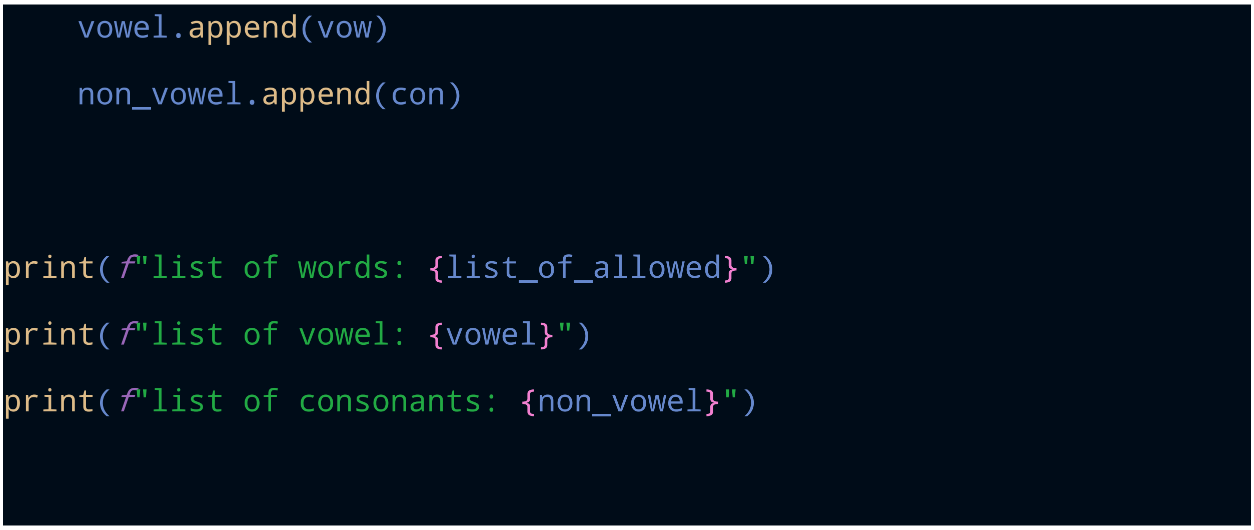
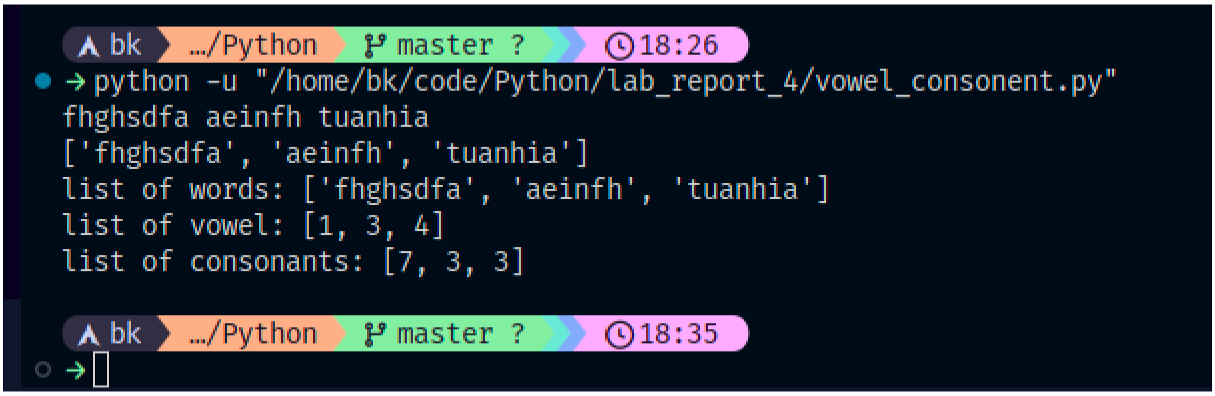
1. List of vowel and consonants

```python
def vowel_counter(str):
    vowel_count=0
    consonant_count=0
    str=str.lower()
    for i in range(len(str)):
        if str[i]=='a' or str[i]=='e' or str[i]=='i' or str[i]=='o' or str[i]=='u':
            vowel_count+=1
        else:
            consonant_count+=1
    return vowel_count,consonant_count




str=input().split()
list_of_not_allowed=[]
list_of_allowed=[]
print(str)
for i in range(len(str)):
    if len(str[i]) < 5:
        list_of_not_allowed.append(str[i])
    else:
        list_of_allowed.append(str[i])

vowel=[]
non_vowel=[]
for i in range(len(list_of_allowed)):
    vow,con = vowel_counter(list_of_allowed[i])
```

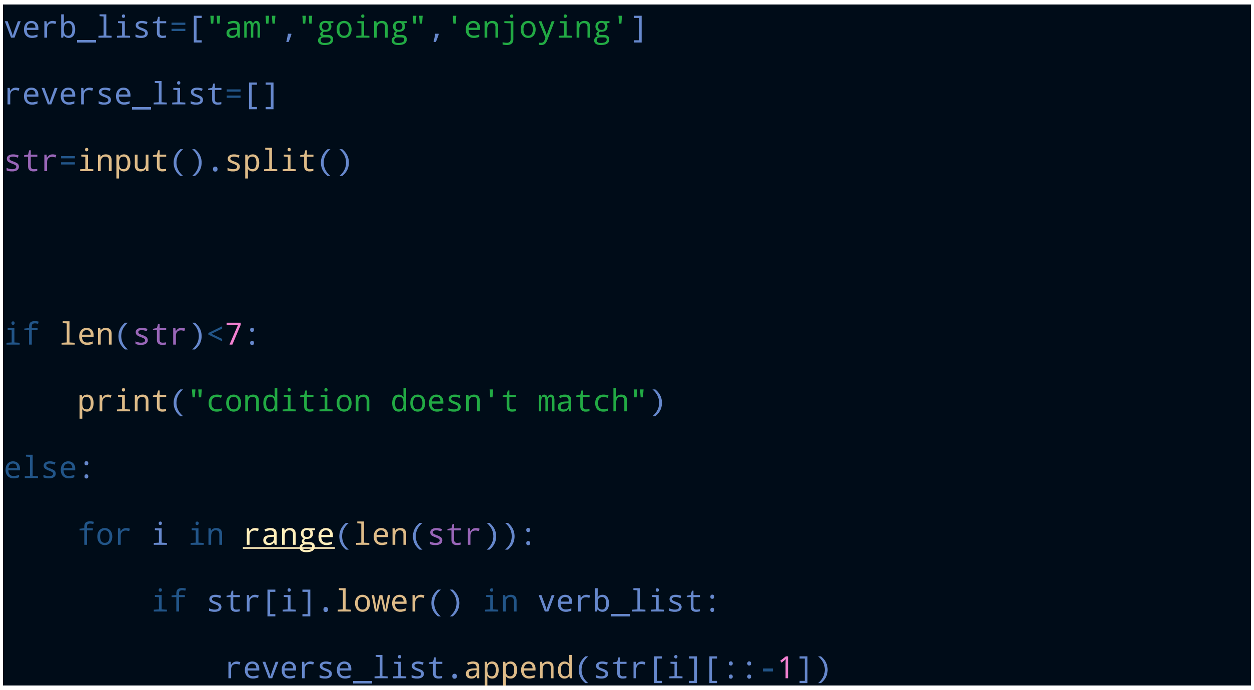


```
    vowel.append(vow)
    non_vowel.append(con)


print(f"list of words: {list_of_allowed}")
print(f"list of vowel: {vowel}")
print(f"list of consonants: {non_vowel}")
```

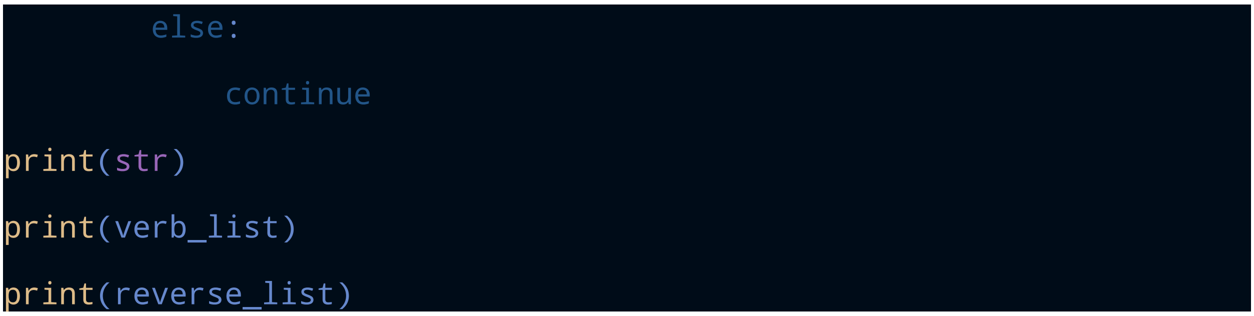


```
 bk  …/Python  master ?  18:26
→ python -u "/home/bk/code/Python/lab_report_4/vowel_consonent.py"
fhghsdfa aeinfh tuanhia
['fhghsdfa', 'aeinfh', 'tuanhia']
list of words: ['fhghsdfa', 'aeinfh', 'tuanhia']
list of vowel: [1, 3, 4]
list of consonants: [7, 3, 3]

 bk  …/Python  master ?  18:35
→
```

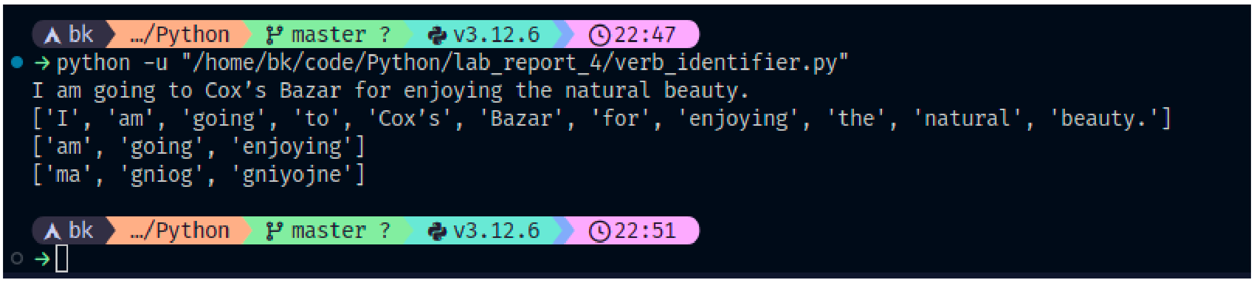
2. Verb identifier



```
verb_list=["am","going",'enjoying']
reverse_list=[]
str=input().split()


if len(str)<7:
    print("condition doesn't match")
else:
    for i in range(len(str)):
        if str[i].lower() in verb_list:
            reverse_list.append(str[i][::-1])
```

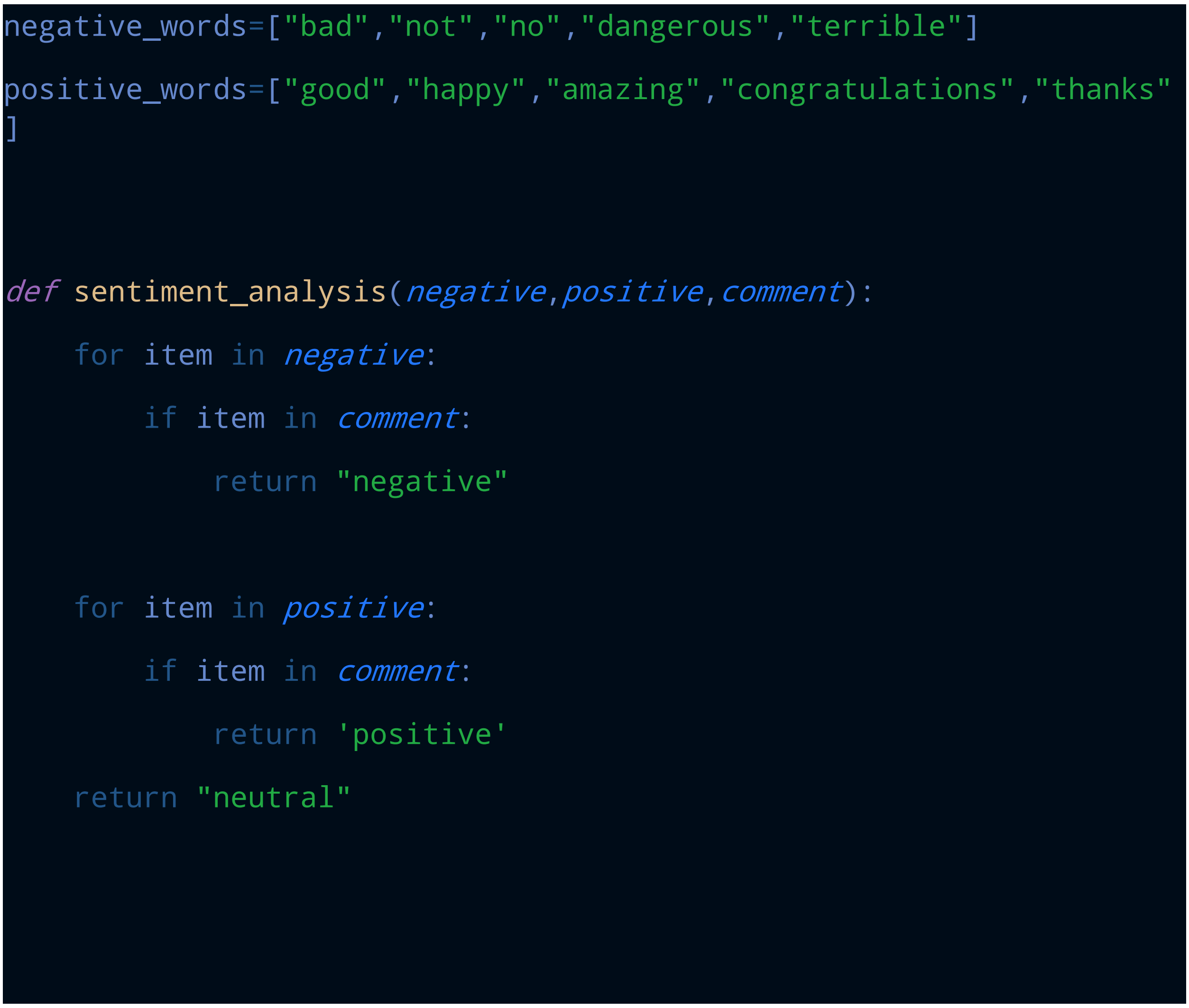


```
        else:
            continue
print(str)
print(verb_list)
print(reverse_list)
```

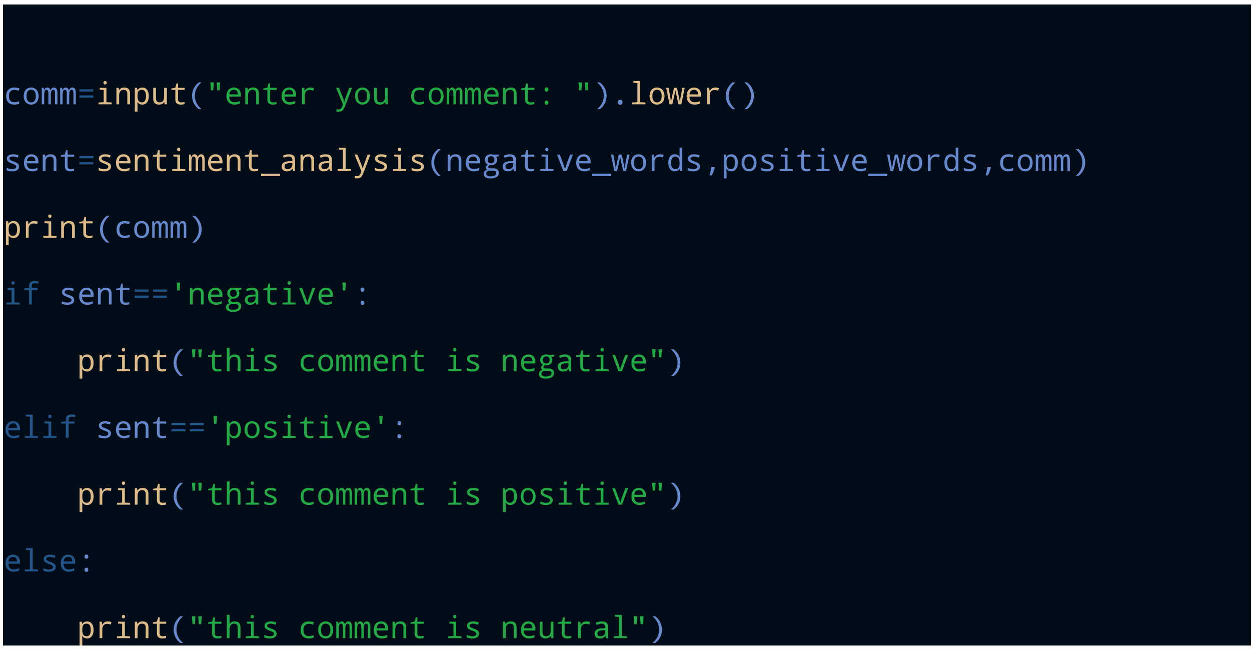


```
 bk  …/Python  master ?  v3.12.6  22:47
● → python -u "/home/bk/code/Python/lab_report_4/verb_identifier.py"
  I am going to Cox's Bazar for enjoying the natural beauty.
  ['I', 'am', 'going', 'to', 'Cox's', 'Bazar', 'for', 'enjoying', 'the', 'natural', 'beauty.']
  ['am', 'going', 'enjoying']
  ['ma', 'gniog', 'gniyojne']

 bk  …/Python  master ?  v3.12.6  22:51
○ →
```

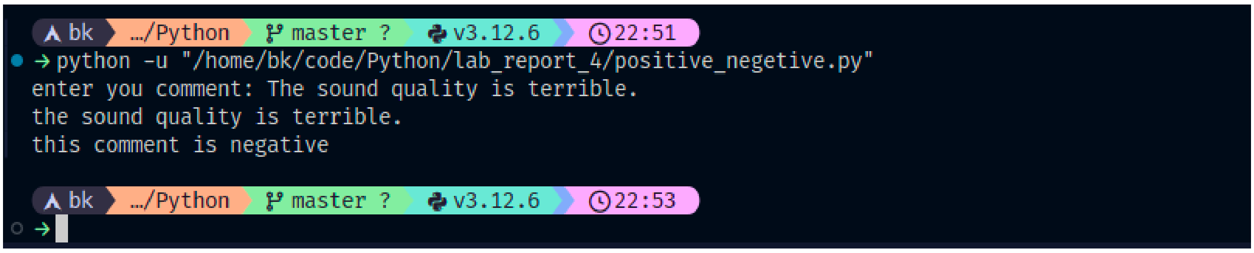
3. Positive Negative word



```
negative_words=["bad","not","no","dangerous","terrible"]
positive_words=["good","happy","amazing","congratulations","thanks"
]


def sentiment_analysis(negative,positive,comment):
    for item in negative:
        if item in comment:
            return "negative"

    for item in positive:
        if item in comment:
            return 'positive'
    return "neutral"
```

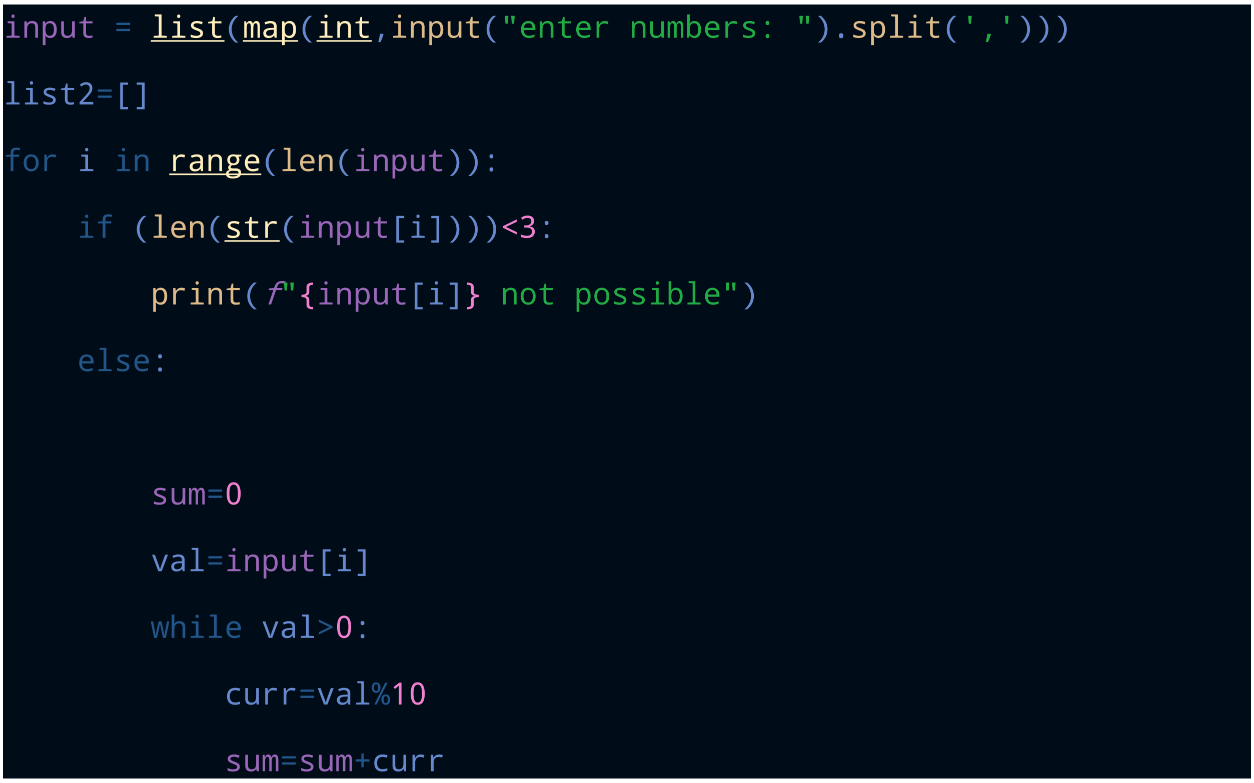


```
comm=input("enter you comment: ").lower()
sent=sentiment_analysis(negative_words,positive_words,comm)
print(comm)
if sent=='negative':
    print("this comment is negative")
elif sent=='positive':
    print("this comment is positive")
else:
    print("this comment is neutral")
```

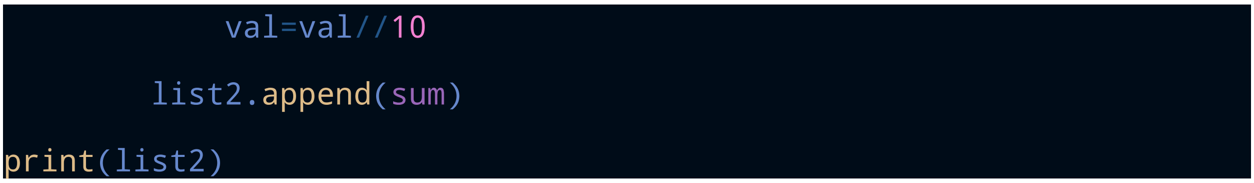


```
 bk  …/Python  master ?  v3.12.6  22:51
● → python -u "/home/bk/code/Python/lab_report_4/positive_negetive.py"
  enter you comment: The sound quality is terrible.
  the sound quality is terrible.
  this comment is negative

 bk  …/Python  master ?  v3.12.6  22:53
○ →
```

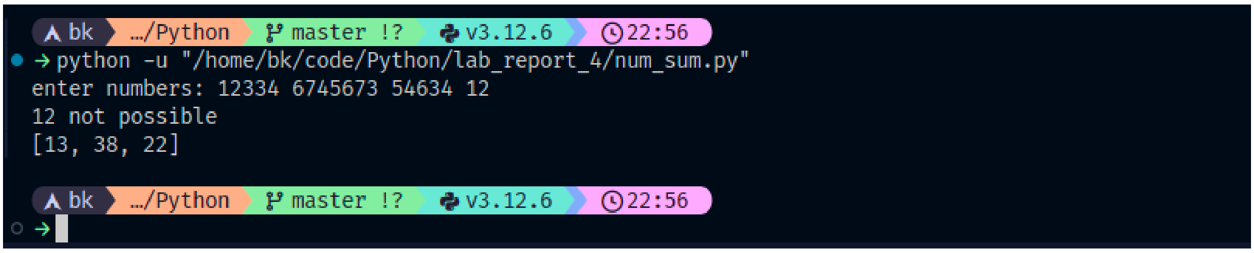
4. Number sum



```
input = list(map(int,input("enter numbers: ").split(',')))
list2=[]
for i in range(len(input)):
    if (len(str(input[i])))<3:
        print(f"{input[i]} not possible")
    else:

        sum=0
        val=input[i]
        while val>0:
            curr=val%10
            sum=sum+curr
```

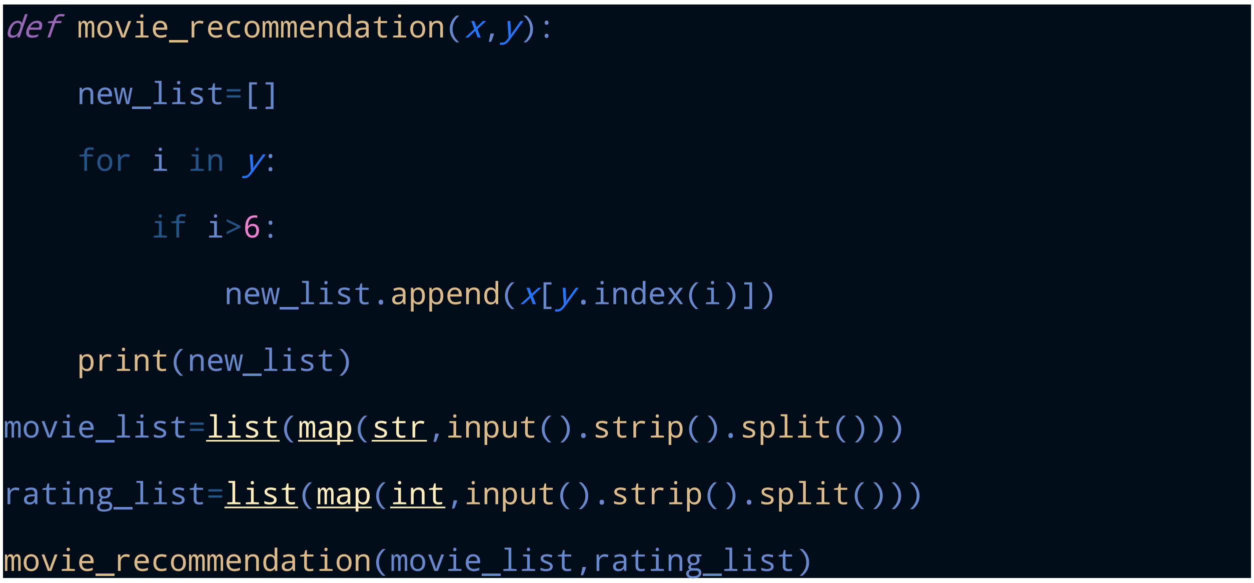


```
            val=val//10
        list2.append(sum)
print(list2)
```

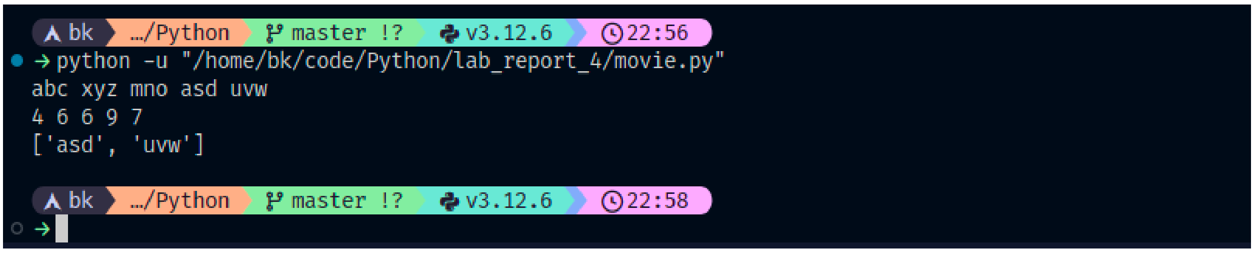


```
 bk  …/Python  master !?  v3.12.6  22:56
● → python -u "/home/bk/code/Python/lab_report_4/num_sum.py"
  enter numbers: 12334 6745673 54634 12
  12 not possible
  [13, 38, 22]

 bk  …/Python  master !?  v3.12.6  22:56
○ →
```

5. Movie

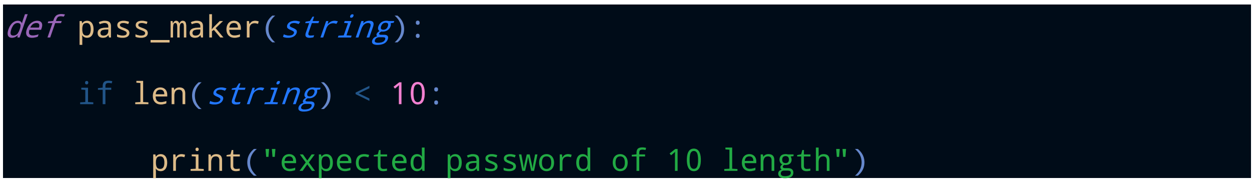


```
def movie_recommendation(x,y):
    new_list=[]
    for i in y:
        if i>6:
            new_list.append(x[y.index(i)])
    print(new_list)
movie_list=list(map(str,input().strip().split()))
rating_list=list(map(int,input().strip().split()))
movie_recommendation(movie_list,rating_list)
```

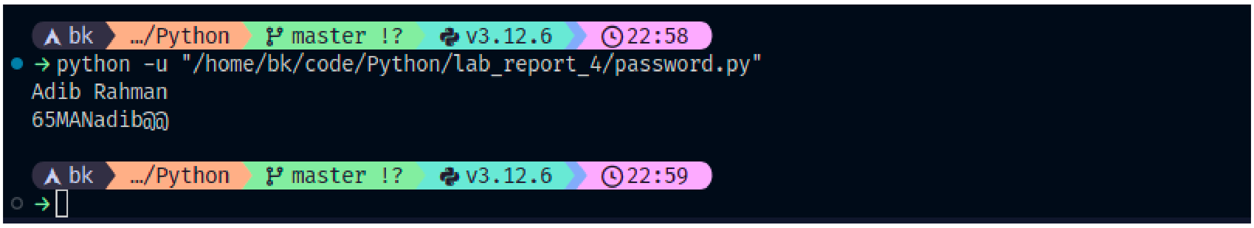


```
 bk  …/Python  master !?  v3.12.6  22:56
● → python -u "/home/bk/code/Python/lab_report_4/movie.py"
  abc xyz mno asd uvw
  4 6 6 9 7
  ['asd', 'uvw']

 bk  …/Python  master !?  v3.12.6  22:58
○ →
```

6. Password



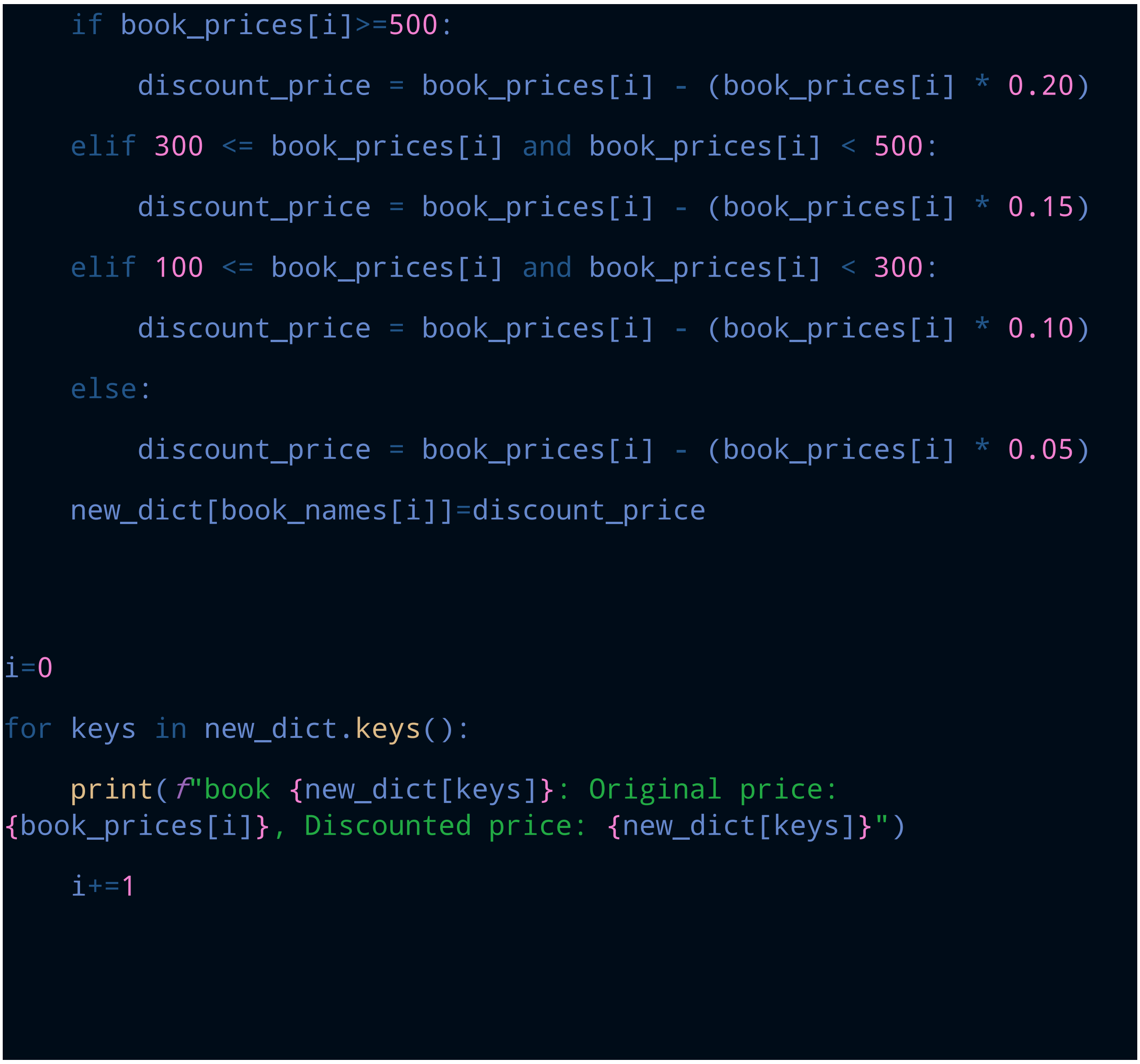
```
def pass_maker(string):
    if len(string) < 10:
        print("expected password of 10 length")
        return



    ascii_str=str(ord(string[0]))
    upper_str=string[-3:].upper()
    lower_str=string[:4].lower()
    special_str="@"
    still_now= ascii_str+upper_str+lower_str
    special_str=special_str*((len(string))-len(still_now))
    return still_now+special_str



string=input()
new_pass = pass_maker(string)
print(new_pass)
```



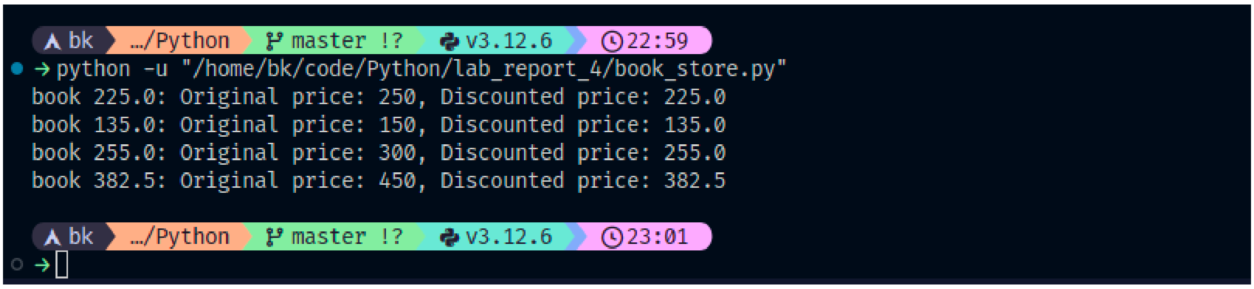
```
 bk  …/Python  master !?  v3.12.6  22:58
● → python -u "/home/bk/code/Python/lab_report_4/password.py"
  Adib Rahman
  65MANadib@@

 bk  …/Python  master !?  v3.12.6  22:59
○ →
```

7. Book discount

```
book_names = ['A', 'B', 'C', 'D']
book_prices = [250, 150, 300, 450]
new_dict={}


for i in range(len(book_prices)):
```

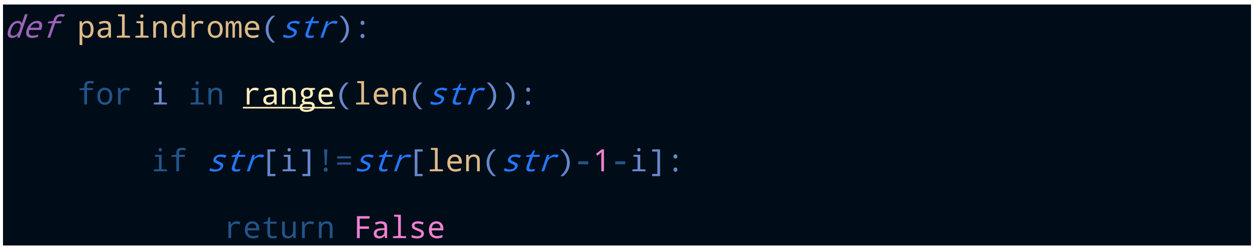


```
    if book_prices[i]>=500:
        discount_price = book_prices[i] - (book_prices[i] * 0.20)
    elif 300 <= book_prices[i] and book_prices[i] < 500:
        discount_price = book_prices[i] - (book_prices[i] * 0.15)
    elif 100 <= book_prices[i] and book_prices[i] < 300:
        discount_price = book_prices[i] - (book_prices[i] * 0.10)
    else:
        discount_price = book_prices[i] - (book_prices[i] * 0.05)
    new_dict[book_names[i]]=discount_price


i=0
for keys in new_dict.keys():
    print(f"book {new_dict[keys]}: Original price: {book_prices[i]}, Discounted price: {new_dict[keys]}")
    i+=1
```

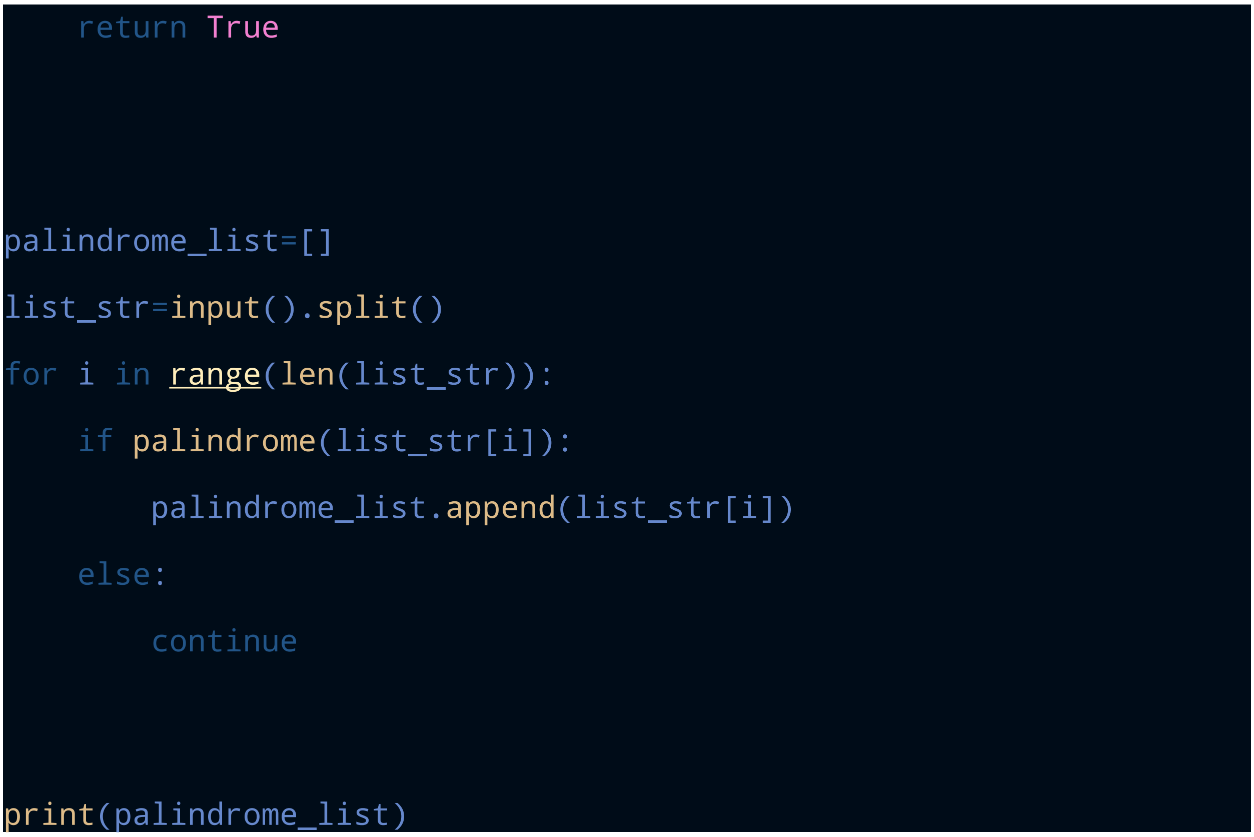


```
 bk  …/Python  master !?  v3.12.6  22:59
● → python -u "/home/bk/code/Python/lab_report_4/book_store.py"
  book 225.0: Original price: 250, Discounted price: 225.0
  book 135.0: Original price: 150, Discounted price: 135.0
  book 255.0: Original price: 300, Discounted price: 255.0
  book 382.5: Original price: 450, Discounted price: 382.5

 bk  …/Python  master !?  v3.12.6  23:01
○ →
```

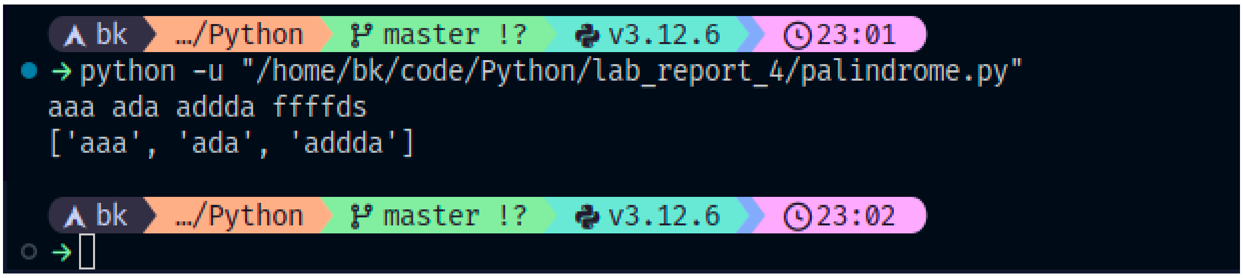
8. Palindrome word



```
def palindrome(str):
    for i in range(len(str)):
        if str[i]!=str[len(str)-1-i]:
            return False
```

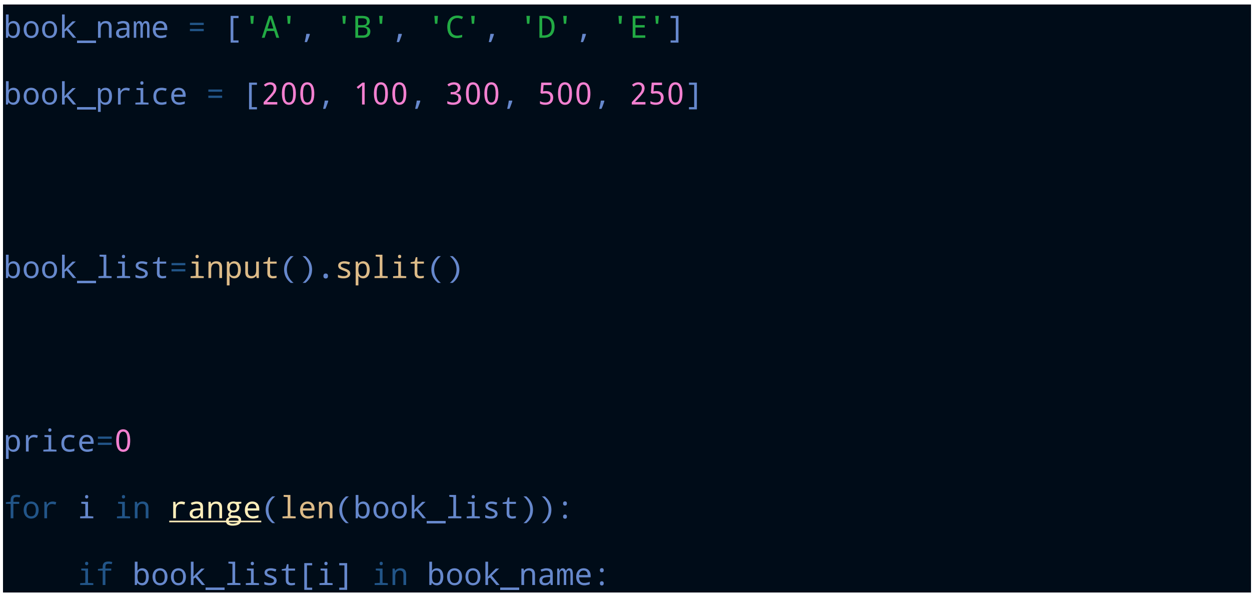


```python
    return True



palindrome_list=[]

list_str=input().split()

for i in range(len(list_str)):

    if palindrome(list_str[i]):

        palindrome_list.append(list_str[i])

    else:

        continue



print(palindrome_list)
```

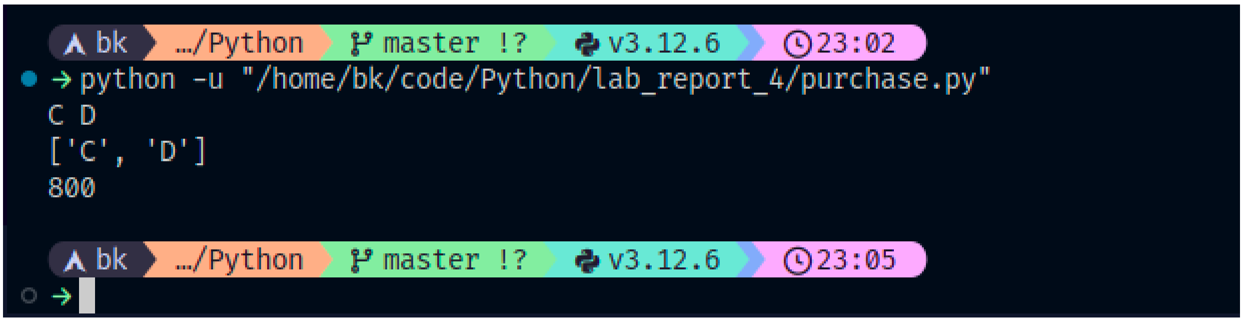


```
 bk  …/Python  master !?  v3.12.6  23:01
● → python -u "/home/bk/code/Python/lab_report_4/palindrome.py"
  aaa ada addda ffffds
  ['aaa', 'ada', 'addda']

 bk  …/Python  master !?  v3.12.6  23:02
○ → 
```

9. Purchase



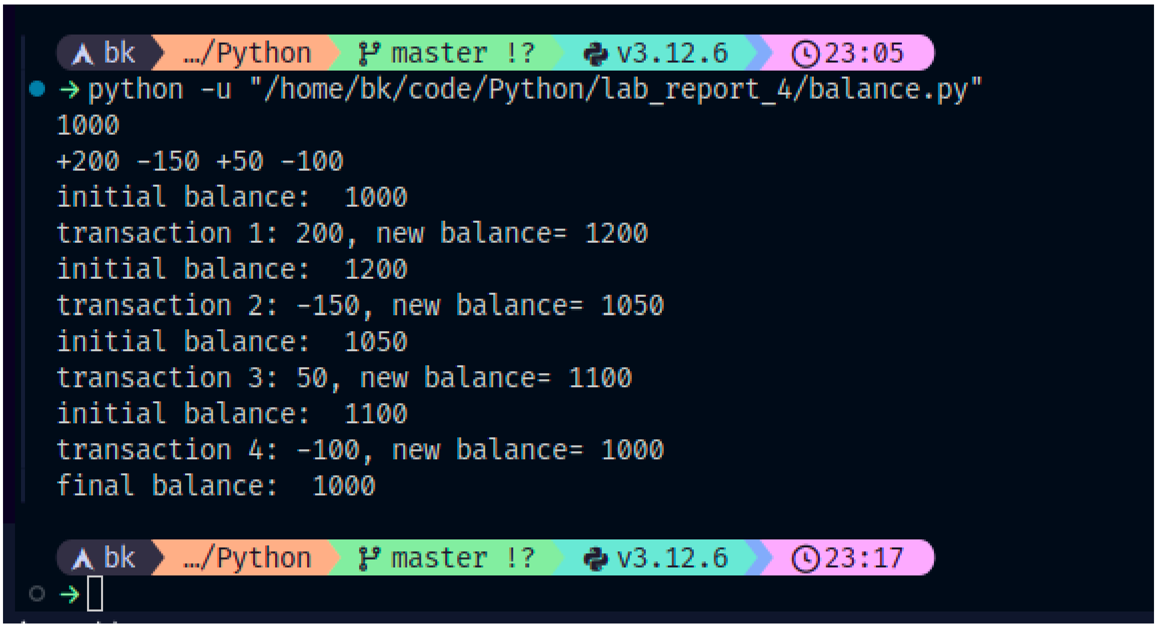
```python
book_name = ['A', 'B', 'C', 'D', 'E']

book_price = [200, 100, 300, 500, 250]



book_list=input().split()



price=0

for i in range(len(book_list)):

    if book_list[i] in book_name:
        index=book_name.index(book_list[i])
        price=price+book_price[index]
    else:
        print("book not found")
print(book_list)
print(price)
```



```
 bk  …/Python   master !?   v3.12.6   23:02
● → python -u "/home/bk/code/Python/lab_report_4/purchase.py"
C D
['C', 'D']
800

 bk  …/Python   master !?   v3.12.6   23:05
○ →
```

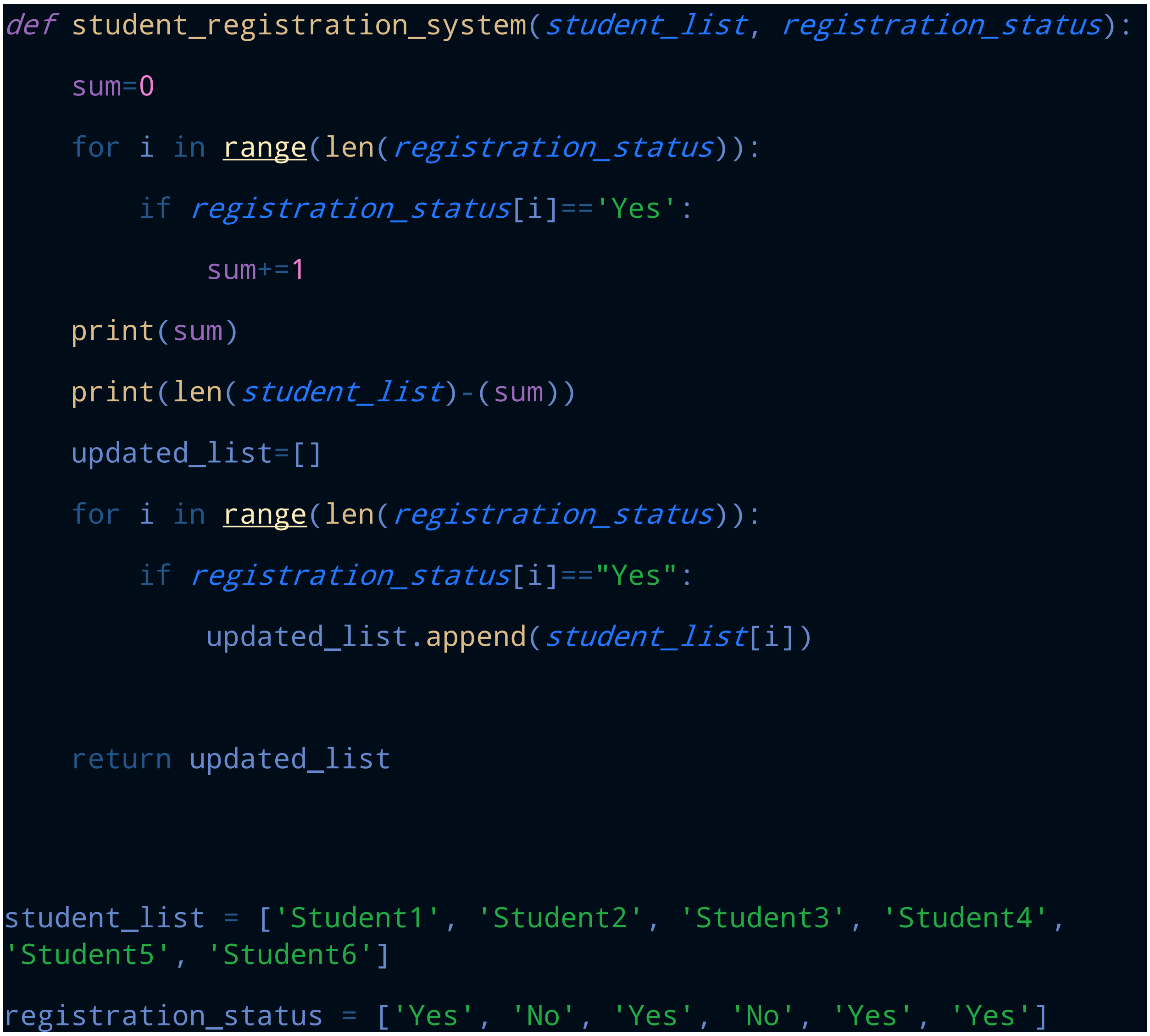
10. Calculate balance

```python
balance=int(input())
transactions=list(map(int,input().split()))

for i in range(len(transactions)):
    print("initial balance: ",balance)
    balance=balance+transactions[i]
    print(f"transaction {i+1}: {str(transactions[i])}, new balance={balance}")

print(f"final balance: ",balance)
```

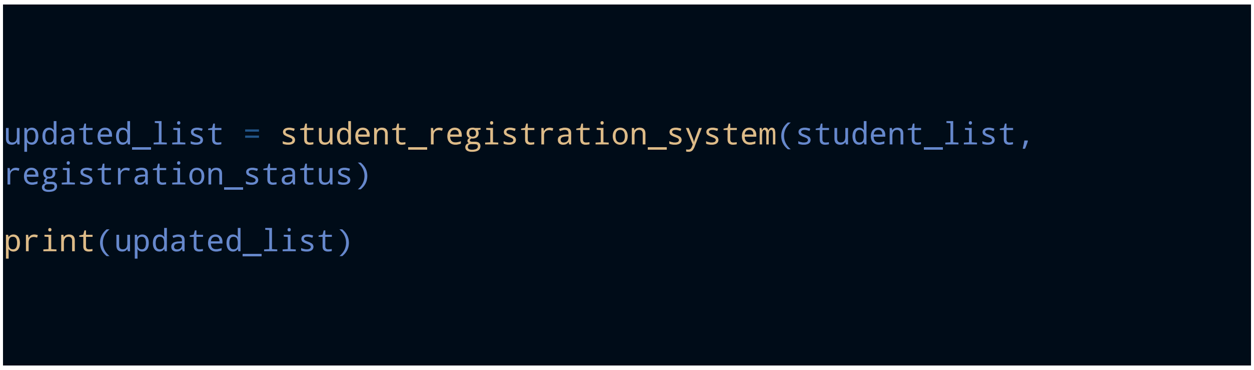


```
 bk  …/Python   master !?   v3.12.6   23:05
● → python -u "/home/bk/code/Python/lab_report_4/balance.py"
1000
+200 -150 +50 -100
initial balance:  1000
transaction 1: 200, new balance= 1200
initial balance:  1200
transaction 2: -150, new balance= 1050
initial balance:  1050
transaction 3: 50, new balance= 1100
initial balance:  1100
transaction 4: -100, new balance= 1000
final balance:  1000

 bk  …/Python   master !?   v3.12.6   23:17
○ →
```

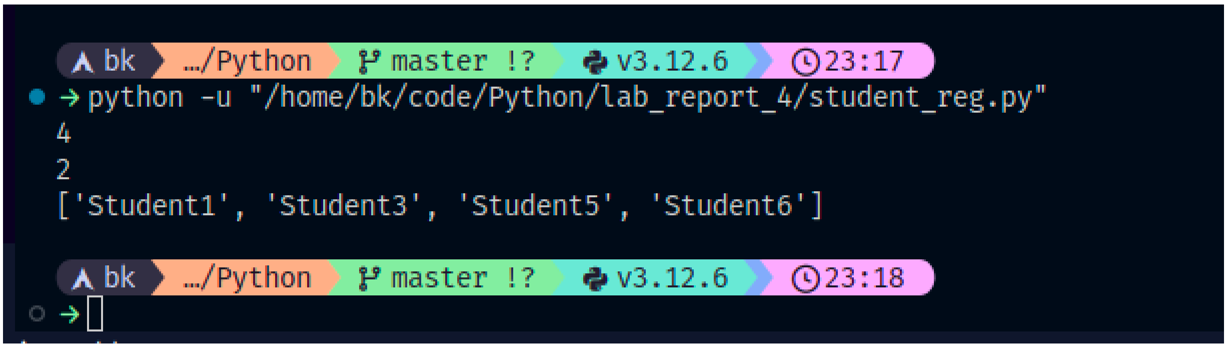
11. Student registration



```python
def student_registration_system(student_list, registration_status):
    sum=0
    for i in range(len(registration_status)):
        if registration_status[i]=='Yes':
            sum+=1
    print(sum)
    print(len(student_list)-(sum))
    updated_list=[]
    for i in range(len(registration_status)):
        if registration_status[i]=="Yes":
            updated_list.append(student_list[i])


    return updated_list



student_list = ['Student1', 'Student2', 'Student3', 'Student4',
'Student5', 'Student6']
registration_status = ['Yes', 'No', 'Yes', 'No', 'Yes', 'Yes']
```

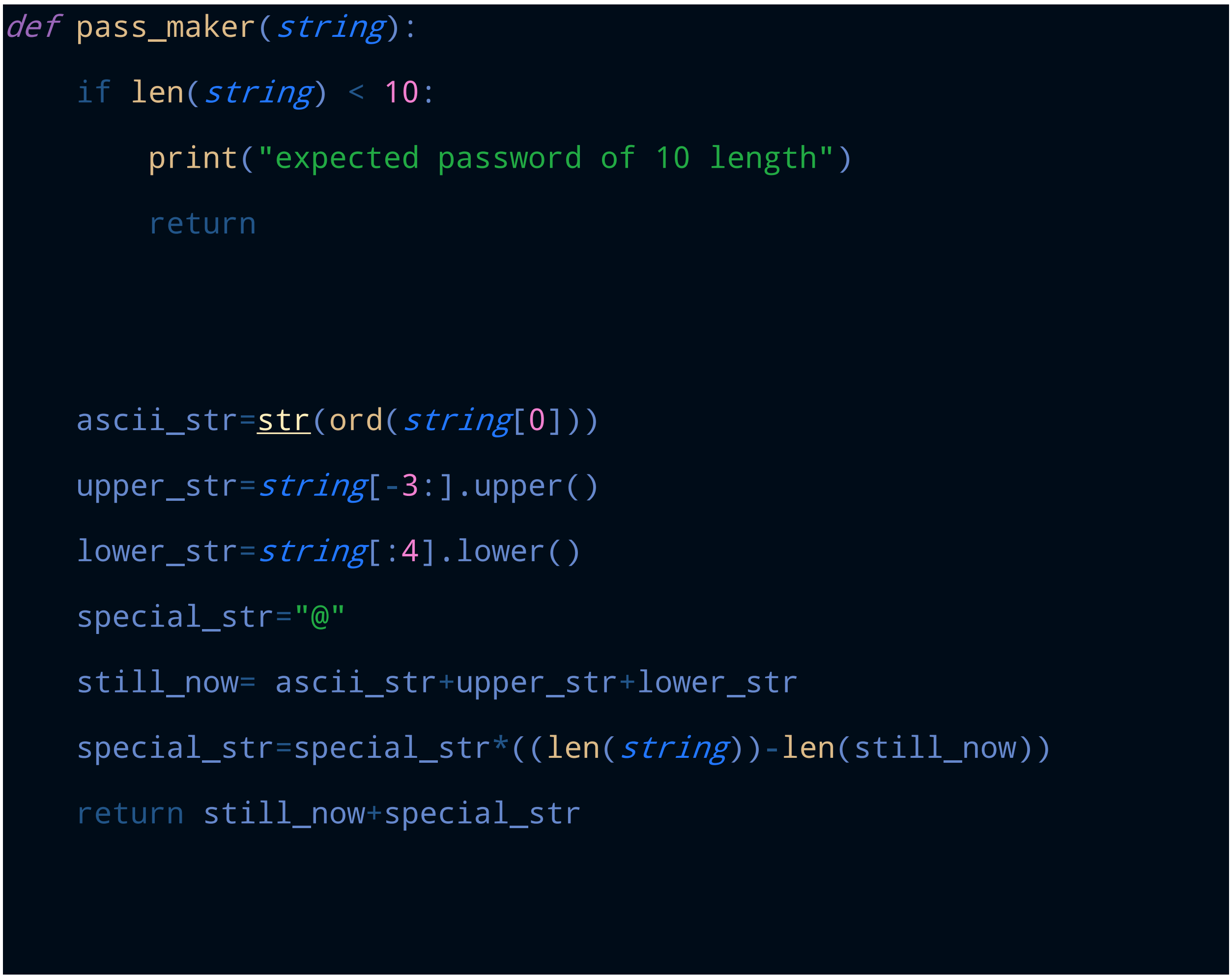


```
updated_list = student_registration_system(student_list,
registration_status)

print(updated_list)
```

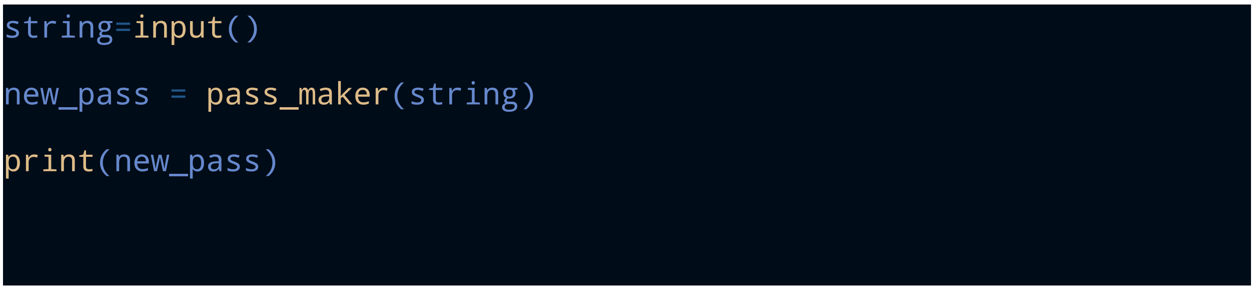


```
 bk  …/Python  master !?  v3.12.6  23:17
● → python -u "/home/bk/code/Python/lab_report_4/student_reg.py"
  4
  2
  ['Student1', 'Student3', 'Student5', 'Student6']

 bk  …/Python  master !?  v3.12.6  23:18
○ →
```

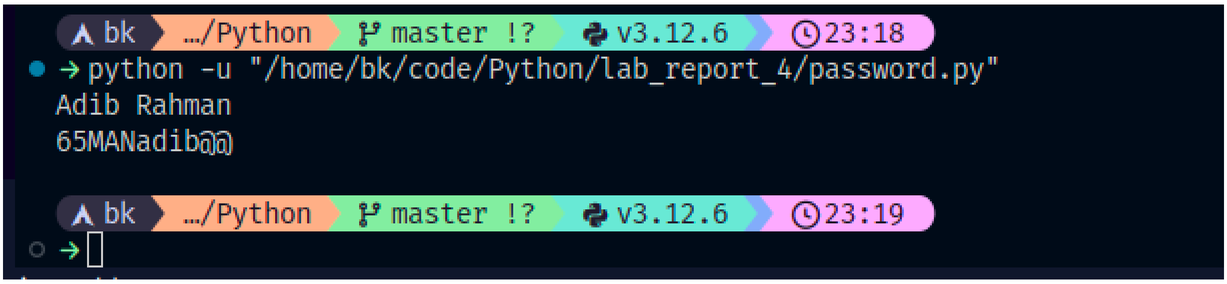
12. Generate Password



```
def pass_maker(string):

    if len(string) < 10:

        print("expected password of 10 length")

        return



    ascii_str=str(ord(string[0]))

    upper_str=string[-3:].upper()

    lower_str=string[:4].lower()

    special_str="@"

    still_now= ascii_str+upper_str+lower_str

    special_str=special_str*((len(string))-len(still_now))

    return still_now+special_str
```

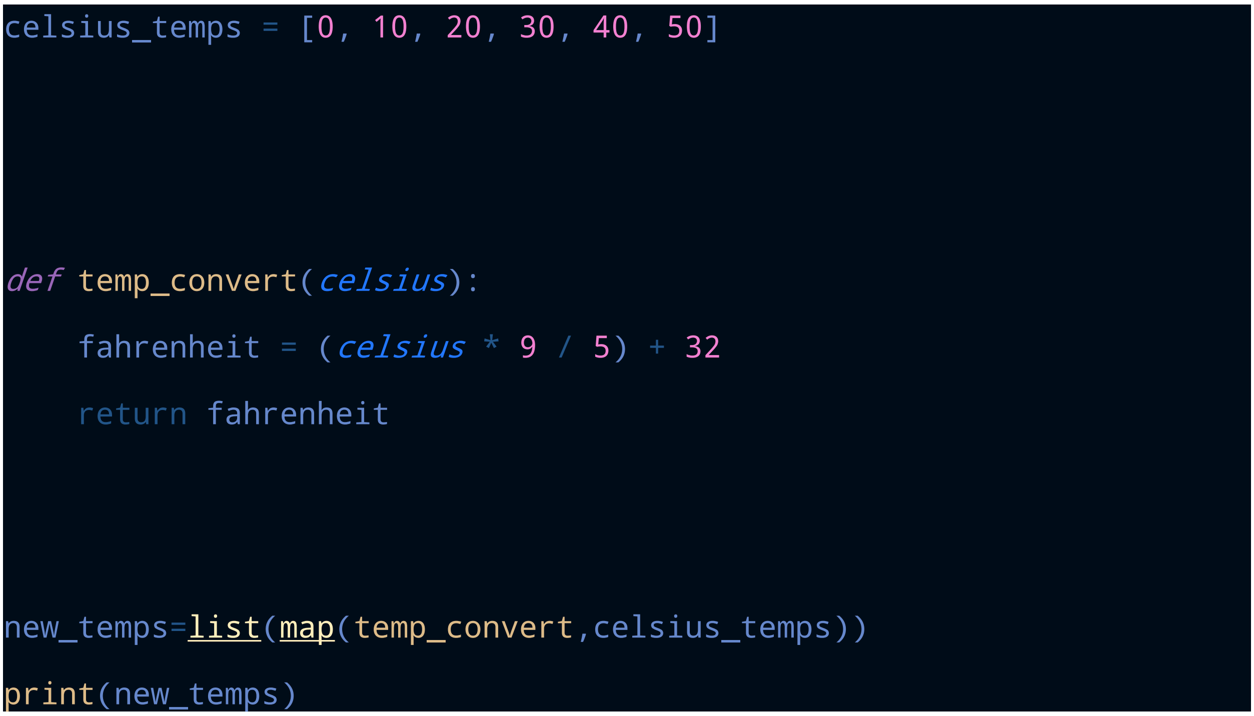


```python
string=input()
new_pass = pass_maker(string)
print(new_pass)
```

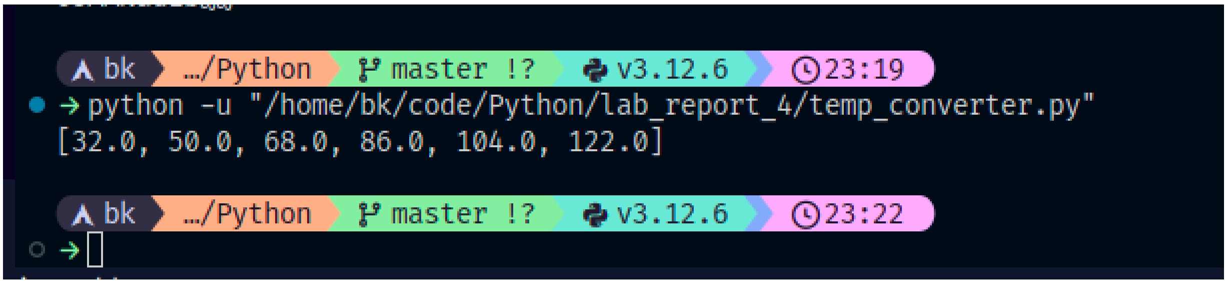


```
 bk  …/Python  master !?  v3.12.6  23:18
● → python -u "/home/bk/code/Python/lab_report_4/password.py"
  Adib Rahman
  65MANadib@@

 bk  …/Python  master !?  v3.12.6  23:19
○ → 
```

13. Temperature

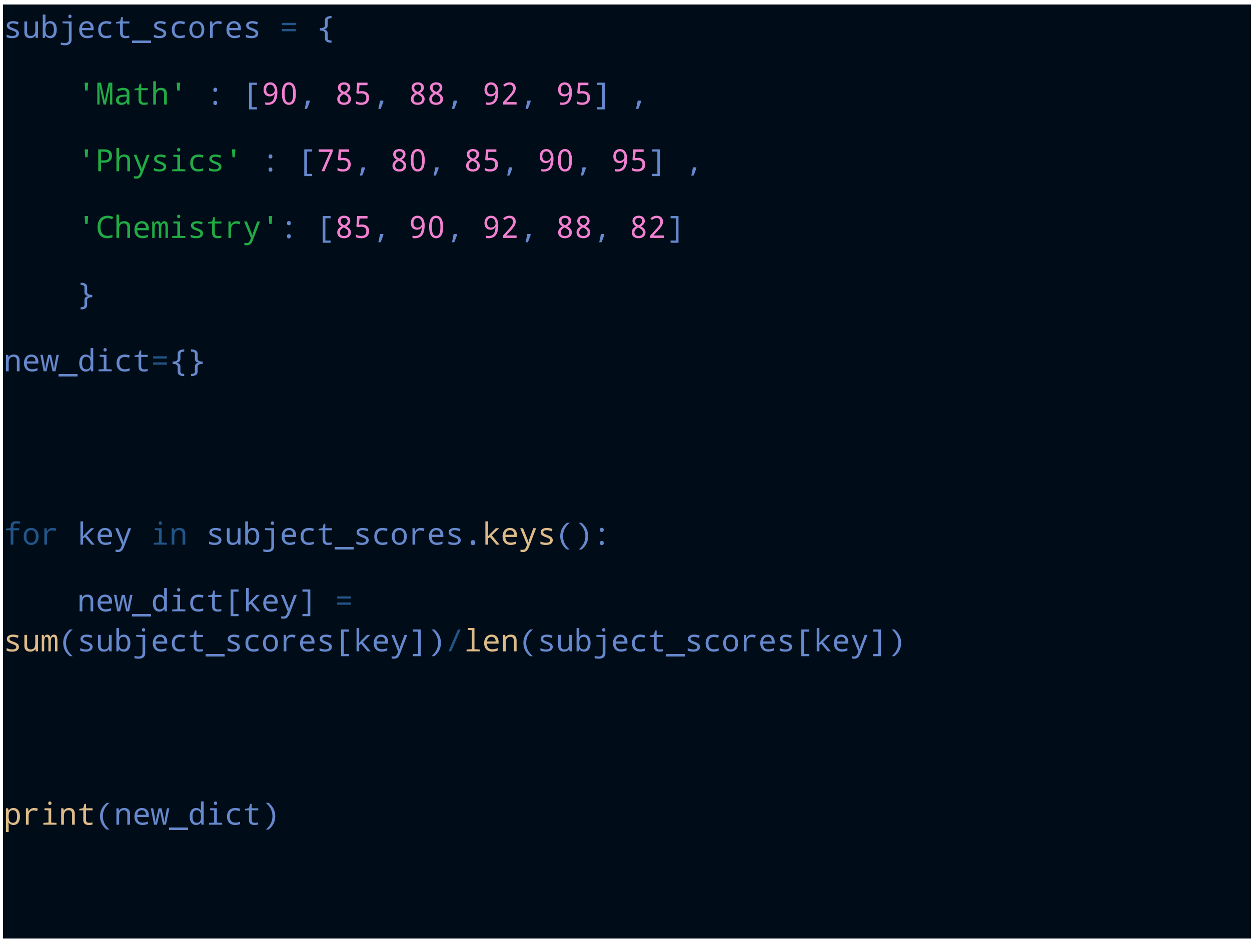


```python
celsius_temps = [0, 10, 20, 30, 40, 50]



def temp_convert(celsius):
    fahrenheit = (celsius * 9 / 5) + 32
    return fahrenheit



new_temps=list(map(temp_convert,celsius_temps))
print(new_temps)
```

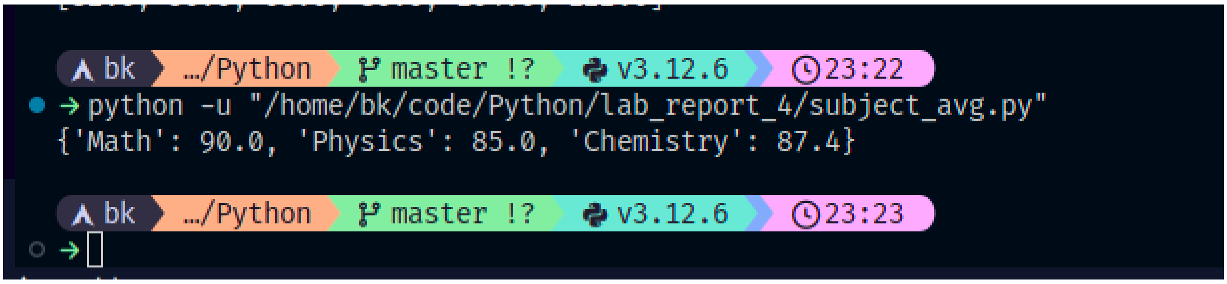


```
 bk  …/Python  master !?  v3.12.6  23:19
● → python -u "/home/bk/code/Python/lab_report_4/temp_converter.py"
  [32.0, 50.0, 68.0, 86.0, 104.0, 122.0]

 bk  …/Python  master !?  v3.12.6  23:22
○ → 
```

14. Subject score

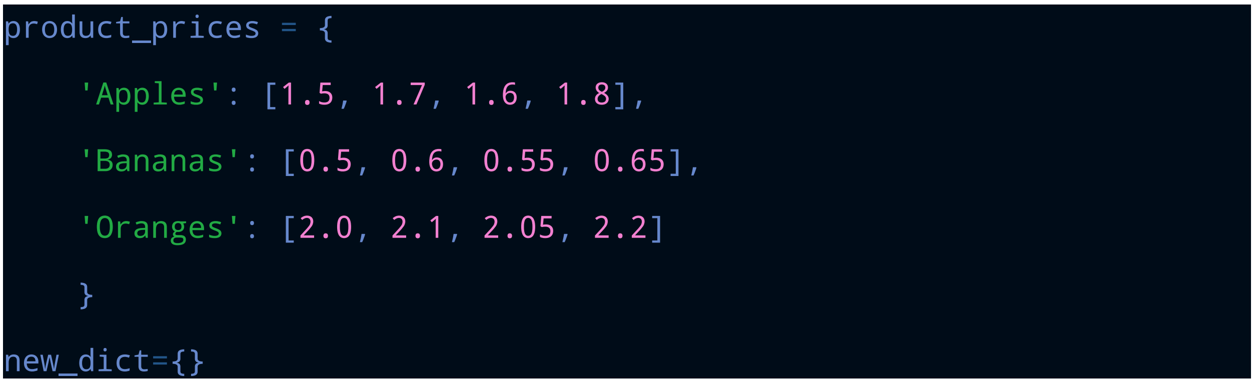


```
subject_scores = {

    'Math' : [90, 85, 88, 92, 95] ,

    'Physics' : [75, 80, 85, 90, 95] ,

    'Chemistry': [85, 90, 92, 88, 82]

    }

new_dict={}



for key in subject_scores.keys():

    new_dict[key] =
sum(subject_scores[key])/len(subject_scores[key])



print(new_dict)
```

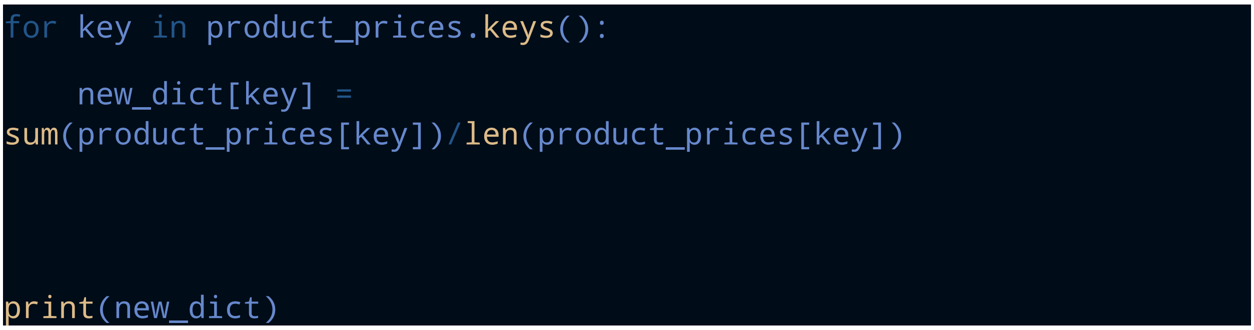


```
 bk  …/Python  master !?  v3.12.6  23:22
● → python -u "/home/bk/code/Python/lab_report_4/subject_avg.py"
  {'Math': 90.0, 'Physics': 85.0, 'Chemistry': 87.4}

 bk  …/Python  master !?  v3.12.6  23:23
○ →
```

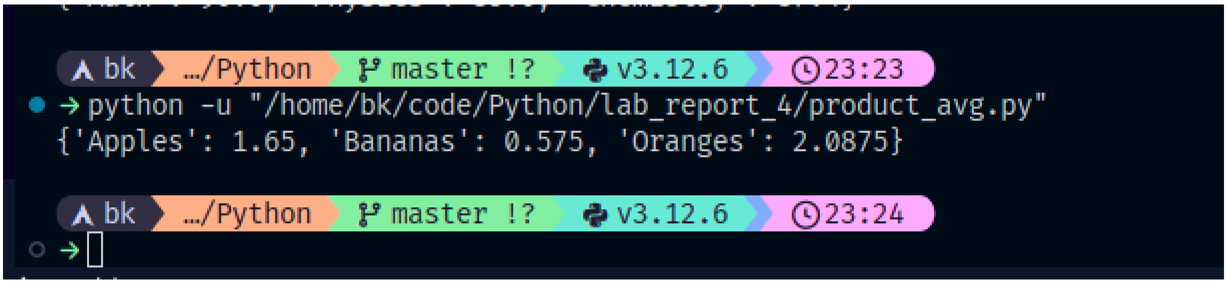
15. Product average



```
product_prices = {

    'Apples': [1.5, 1.7, 1.6, 1.8],

    'Bananas': [0.5, 0.6, 0.55, 0.65],

    'Oranges': [2.0, 2.1, 2.05, 2.2]

    }

new_dict={}
```



```
for key in product_prices.keys():

    new_dict[key] =
sum(product_prices[key])/len(product_prices[key])



print(new_dict)
```



```
  bk  …/Python  master !?  v3.12.6  23:23
● → python -u "/home/bk/code/Python/lab_report_4/product_avg.py"
  {'Apples': 1.65, 'Bananas': 0.575, 'Oranges': 2.0875}

  bk  …/Python  master !?  v3.12.6  23:24
○ →
```