1. String reverse

```python
def reverse(str):
    new_str=""


    for i in range(len(str)):
        new_str+=str[len(str)-1-i]


    return new_str



str="hello world"
new_str= reverse(str)
print(new_str)
```

```
 bk  .../Python  master !?  v3.12.6  21:48
 → python -u "/home/bk/code/Python/lab_report_2/string_reverse.py"
dlrow olleh

 bk  .../Python  master !?  v3.12.6  21:48
 →
```

2. Type conversion

```python
list=[1,2,3,4,5,6,7]
str_list=[]
for i in range(len(list)):
    str_list.append(str(list[i]))



print(str_list)
```

```
bk …/Python master !? v3.12.6 21:48
→ python -u "/home/bk/code/Python/lab_report_2/type_conversion.py"
['1', '2', '3', '4', '5', '6', '7']

bk …/Python master !? v3.12.6 21:49
→
```

3. Temperature converter

```python
celsius=float(input())



fahrenheit = (celsius * 9 / 5) + 32



print(fahrenheit)
```

```
bk …/Python master !? v3.12.6 21:50
→ python -u "/home/bk/code/Python/lab_report_2/temp_converter.py"
99.9
211.82

bk …/Python master !? v3.12.6 21:50
→
```

4. String palindrome

```python
str='aabbaa'



for i in range(len(str)):
    if str[i]!=str[len(str)-1-i]:
        print("not palindrome")
        break
print("palindrome")
```

```
bk .../Python master !? v3.12.6 21:50
→ python -u "/home/bk/code/Python/lab_report_2/string_palindrome.py"
palindrome

bk .../Python master !? v3.12.6 21:51
→
```

5. String reverse with slicing

```python
str="hello world"



new_str=str[::-1]



print(new_str)
```

```
bk .../Python master !? v3.12.6 21:51
→ python -u "/home/bk/code/Python/lab_report_2/string_reverse_slicing.py"
dlrow olleh

bk .../Python master !? v3.12.6 21:52
→
```

6. Grade classification

```python
student_percent=float(input())



grade=""

if student_percent >=90:

    grade+="A+"



elif student_percent >=80 and student_percent<90:

    grade+="A"
```

```
elif student_percent >=70 and student_percent<80:
    grade+="B"
elif student_percent >=60 and student_percent<70:
    grade+="C"
else :
    grade+="fail"


print(grade)
```

```
bk .../Python master !? v3.12.6 21:52
→ python -u "/home/bk/code/Python/lab_report_2/grade_classification.py"
86.5
A

bk .../Python master !? v3.12.6 21:53
→
```

7. Table of a number

```
number = 9


for i in range(11):
    print(f'{number} * {i} = {number*i}')
```

```
bk .../Python master !? v3.12.6 21:53
→ python -u "/home/bk/code/Python/lab_report_2/tempCodeRunnerFile.py"
9 * 0 = 0
9 * 1 = 9
9 * 2 = 18
9 * 3 = 27
9 * 4 = 36
9 * 5 = 45
9 * 6 = 54
9 * 7 = 63
9 * 8 = 72
9 * 9 = 81
9 * 10 = 90

bk .../Python master !? v3.12.6 21:54
→
```

8. Count digit

```python
number=100010

count=0

while number != 0:

    count+=1

    number=number//10



print(count)
```

```
bk …/Python master !? v3.12.6 21:54
→ python -u "/home/bk/code/Python/lab_report_2/count_digits.py"
6

bk …/Python master !? v3.12.6 21:55
→
```

9. Fibonacci sequence

```python
list=[0,1]

number=int(input())

for i in range(number):

    list.append(list[i]+list[i+1])

print(list)
```

```
bk …/Python master !? v3.12.6 21:55
→ python -u "/home/bk/code/Python/lab_report_2/fibonacci.py"
9
[0, 1, 1, 2, 3, 5, 8, 13, 21, 34, 55]

bk …/Python master !? v3.12.6 21:56
→
```

10. Sum of even numbers

```python
number=int(input())
```

```python
sum=0



for i in range(number+1):
    if i%2==0:
        sum+=i



print(sum)
```

```
bk .../Python master !? v3.12.6 21:56
→ python -u "/home/bk/code/Python/lab_report_2/sum_of_even.py"
10
30

bk .../Python master !? v3.12.6 21:57
→
```

11. Print patterns

```python
num=5
for i in range(num):
    for j in range(i):
        print(" * ",end='')
    print()



for i in range(num):
    for j in range(num-i):
        print(" * ",end='')
    print()
```

```
bk .../Python master !? v3.12.6 21:57
→ python -u "/home/bk/code/Python/lab_report_2/print_patterns.py"

*
* *
* * *
* * * *
* * * * *
* * * *
* * *
* *
*

bk .../Python master !? v3.12.6 21:58
→
```

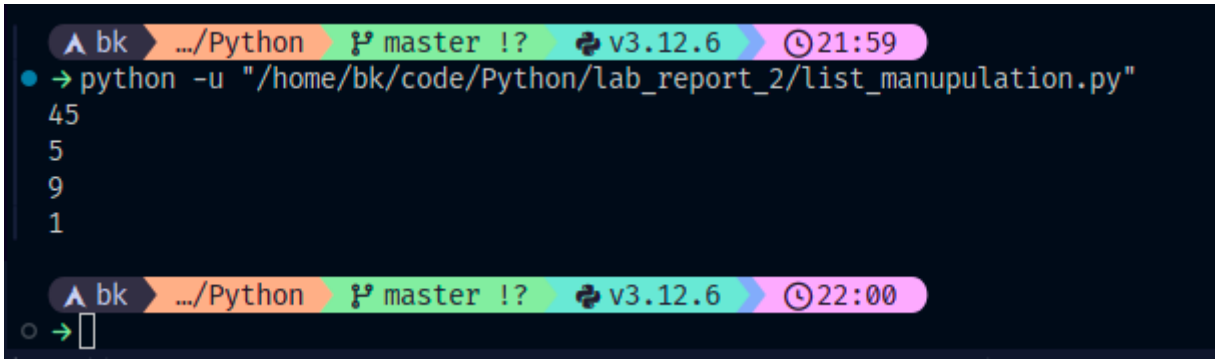
12. Prime number checker

```python
number=int(input())
prime=True
for i in range(2,number):
    if(number%i==0):
        prime=False
        break

if(prime):
    print("prime")
else:
    print("non prime")
```

```
bk .../Python master !? v3.12.6 21:58
→ python -u "/home/bk/code/Python/lab_report_2/prime_number.py"
50
non prime

bk .../Python master !? v3.12.6 21:59
→
```

13. List manipulation

```python
list=[1,2,3,4,5,6,7,8,9]
sum=0
max=list[0]
min=list[0]
for i in range(len(list)):
    sum=sum+list[i]
    if(list[i]>max):
        max=list[i]
    if(list[i]<min):
        min=list[i]


print(sum)
print(sum//len(list))
print(max)
print(min)
```



14. Reverse string

```python
str="hello world"
new_str=""
```

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

    new_str+=str[len(str)-1-i]



print(new_str)
```

```
 bk .../Python  master !?  v3.12.6  22:00
 → python -u "/home/bk/code/Python/lab_report_2/reverse_string.py"
dlrow olleh

 bk .../Python  master !?  v3.12.6  22:01
 →
```

15. List sum

```
list=[1,2,3,4,5,6,7,8,9]

sum=0



for i in range(len(list)):

    sum=sum+list[i]


print(sum)
```

```
 bk .../Python  master !?  v3.12.6  22:01
 → python -u "/home/bk/code/Python/lab_report_2/list_sum.py"
45

 bk .../Python  master !?  v3.12.6  22:01
 →
```

16. List average

```
list=[1,2,3,4,5,6,7,8,9]
```

```python
sum=0


for i in range(len(list)):
    sum=sum+list[i]



print(sum//len(list))
```

```
bk …/Python master !? v3.12.6 22:01
→ python -u "/home/bk/code/Python/lab_report_2/list_avg.py"
5

bk …/Python master !? v3.12.6 22:02
→
```

17. List max and min

```python
list=[1,2,3,4,5,6,7,8,9]



max=list[0]
min=list[0]
for i in range(len(list)):
    if(list[i]>max):
        max=list[i]
    if(list[i]<min):
        min=list[i]


print(max)
print(min)
```

```
bk .../Python master !? v3.12.6 22:02
→ python -u "/home/bk/code/Python/lab_report_2/list_min_max.py"
9
1

bk .../Python master !? v3.12.6 22:03
→
```

18. List sorting

```python
list=[9,8,7,6,5,4,3,2,1]



for i in range(len(list)):
    for j in range(len(list)-1-i):
        if list[j]>list[j+1]:
            temp=list[j]
            list[j]=list[j+1]
            list[j+1]=temp


print(list)
```

```
bk .../Python master !? v3.12.6 22:03
→ python -u "/home/bk/code/Python/lab_report_2/list_sort.py"
[1, 2, 3, 4, 5, 6, 7, 8, 9]

bk .../Python master !? v3.12.6 22:04
→
```

19. List filtering

```python
list=[1,2,3,4,5,6,7,8,9]

list2=[]



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

```
    if list[i]%2==0:
        list2.append(list[i])


print(list2)
```

```
bk .../Python master !? v3.12.6 22:04
→ python -u "/home/bk/code/Python/lab_report_2/list_filter.py"
[2, 4, 6, 8]

bk .../Python master !? v3.12.6 22:05
→
```

20. List reverse

```
list=[1,2,3,4,5,6,7,8,9]
reversed_list=[]


for i in range(len(list)-1,-1,-1):
    reversed_list.append(list[i])


print(reversed_list)
```

```
bk .../Python master !? v3.12.6 22:05
→ python -u "/home/bk/code/Python/lab_report_2/list_reversal.py"
[9, 8, 7, 6, 5, 4, 3, 2, 1]

bk .../Python master !? v3.12.6 22:06
→
```

21. List manipulation 2

```
list1=[1,2,3,4,5,6,7,8,9]
list2=[5,6,7,8,9,10,11,12,13,14]
```

```python
new_list=[]



for i in range(len(list1)):
    if list1[i] in list2:
        new_list.append(list1[i])


print(new_list)
```

```
bk .../Python master !? v3.12.6 22:06
→ python -u "/home/bk/code/Python/lab_report_2/list_manupulation_2.py
[5, 6, 7, 8, 9]

bk .../Python master !? v3.12.6 22:06
→
```

22. List element count

```python
list=[1,2,3,4,5,5,5,6,6,6,7,8,9,10,11,12,13,14]



dict={}



for i in range(len(list)):
    if list[i] in dict:
        dict[list[i]]+=1
    else:
        dict[list[i]]=1


print(dict)
```

```
bk .../Python master !? v3.12.6 22:06
→ python -u "/home/bk/code/Python/lab_report_2/list_element_count.py"
{1: 1, 2: 1, 3: 1, 4: 1, 5: 3, 6: 3, 7: 1, 8: 1, 9: 1, 10: 1, 11: 1, 12: 1, 13:
 1, 14: 1}

bk .../Python master !? v3.12.6 22:07
→
```

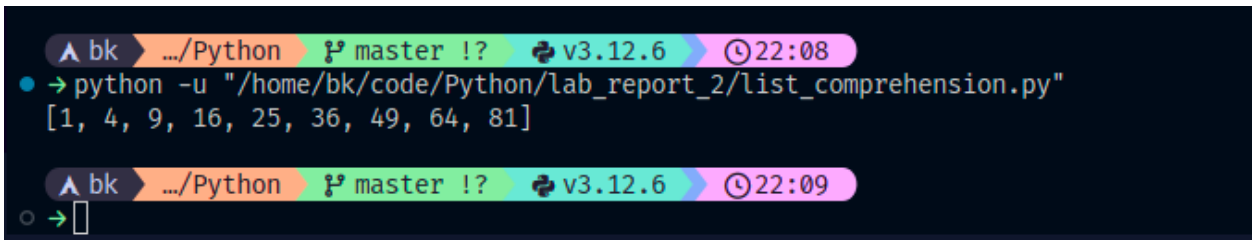
23. List duplicate removal

```python
list=[1,2,3,4,5,5,5,6,6,6,7,8,9]



list2=[]



for i in range(len(list)):

    if list[i] not in list2:

        list2.append(list[i])


print(list2)
```

```
bk .../Python master !? v3.12.6 22:07
→ python -u "/home/bk/code/Python/lab_report_2/list_duplicate_remove.py"
[1, 2, 3, 4, 5, 6, 7, 8, 9]

bk .../Python master !? v3.12.6 22:08
→
```

24. List comprehension

```python
list1=[1, 2, 3, 4, 5, 6, 7, 8, 9]

list2=[i**2 for i in list1]

print(list2)
```


bk …/Python master !? v3.12.6 22:08
→ python -u "/home/bk/code/Python/lab_report_2/list_comprehension.py"
[1, 4, 9, 16, 25, 36, 49, 64, 81]
bk …/Python master !? v3.12.6 22:09
→