1. Password validator

```python
length,upper,lower,num=0,0,0,0


password = input()


for i in range(len(password)):
    if len(password)>=8:
        length=1
    if password[i].isupper():
        upper=1
    if password[i].islower():
        lower=1
    if password[i].isnumeric():
        num=1

if (length+upper+lower+num)>=4:
    print("password accepted")
else:
    print("password not accepted")
```

```
bk …/Python master !? v3.12.6 22:09
→ python -u "/home/bk/code/Python/lab_report_3/password_validator.py"
hello
password not accepted

bk …/Python master !? v3.12.6 22:16
→
```

2. Divisible by 3 or 5

```python
for i in range(1,51):
```

```
    if i%3 != 0 and i%5 !=0:
        continue
    else:
        print(i,end=' ')
```

```
bk …/Python master !? v3.12.6 22:16
→ python -u "/home/bk/code/Python/lab_report_3/divisible_by_3_5.py"
3 5 6 9 10 12 15 18 20 21 24 25 27 30 33 35 36 39 40 42 45 48 50
bk …/Python master !? v3.12.6 22:17
→
```

3. Positive number sum

```
sum=0
while True:
    num=float(input())
    if(num<0):
        break
    sum=sum+num

print(sum)
```

```
bk …/Python master !? v3.12.6 22:18
→ python -u "/home/bk/code/Python/lab_report_3/possitive_number_sum.py"
5
6
78
3
-1
92.0
bk …/Python master !? v3.12.6 22:18
→
```

4. Word palindrome

```python
while True:



    str=input()
    if str=='stop':
        break
    if len(str)<3:
        print("skipped")
        continue



    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 22:20
→ python -u "/home/bk/code/Python/lab_report_3/palindrome_checker.py"
bishwajit
not palindrome
stop

bk .../Python master !? v3.12.6 22:21
→
```

5. Vowel counter

```python
str=input()
str=str.lower()
vowel_list=['a','e','i','o','u']
vowel_count=0
for i in range(len(str)):
    if str[i] not in vowel_list:
```

```
        continue
    else:
        vowel_count+=1

print(vowel_count)
```

```
bk .../Python master !? v3.12.6 22:21
→ python -u "/home/bk/code/Python/lab_report_3/vowel_counter.py"
bishwajit
3

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

6. Unique character

```
str=input()
str_set=set()
break_=False
index=0
for i in range(len(str)):
    if str[i] not in str_set:
        str_set.add(str[i])
    else:
        index=i
        break_=True
        break

if break_:
    print("repeat found at index",index)
else:
    print('repeat not found')
```

7. Student information system

```python
students = {}


def display_student_data():
    if len(students)==0:
        print("No Students")
        return


    for student in students.values():
        print(f"Name: {student['name']}")
        print(f"Roll No: {student['roll_no']}")
        print(f"Age: {student['age']:.2f}")


while True:
    print("\nChoose an option:")
    print("1. Add Student")
    print("2. Display Student Data")
    print("3. Exit")


    choice = input("Enter your choice (1/2/3): ")
    name_input=""
```

```
    roll_no_input=0
    age_input=0.00


    if choice == '1':
        checker = int(input("enter 1 for enter name: "))
        if checker==1:
            name_input = input("Enter student's name: (max 5
characters): ")
        else:
            print("Invalid choice")
        checker = int(input("enter 1 for enter roll: "))
        if checker==1:
            roll_no_input = int(input("Enter student's Roll No: "))
        else:
            print("Invalid choice")
        checker = int(input("enter 1 for enter age: "))
        if checker==1:
            age_input = float(input("Enter student's age (float):
"))
        else:
            print("Invalid choice")


        students[roll_no_input] = { "name": name_input, "roll_no":
roll_no_input, "age": age_input }
        print("Student added.")
    elif choice == '2':
        display_student_data()
    elif choice == '3':
        print("Exiting")
```

```
        break
    else:
        print("Invalid choice")
```

```
bk .../Python master !? v3.12.6 22:23
→ python -u "/home/bk/code/Python/lab_report_3/student_information_system.py"

Choose an option:
1. Add Student
2. Display Student Data
3. Exit
Enter your choice (1/2/3): 1
enter 1 for enter name: 1
Enter student's name: (max 5 characters): bk
enter 1 for enter roll: 1
Enter student's Roll No: 23
enter 1 for enter age: 1
Enter student's age (float): 22
Student added.

Choose an option:
1. Add Student
2. Display Student Data
3. Exit
Enter your choice (1/2/3): 2
Name: bk
Roll No: 23
Age: 22.00

Choose an option:
1. Add Student
2. Display Student Data
3. Exit
Enter your choice (1/2/3): 3
Exiting

bk .../Python master !? v3.12.6 22:25
→
```

8. Grocery shop

```
grocery_items = {}



while True:
```

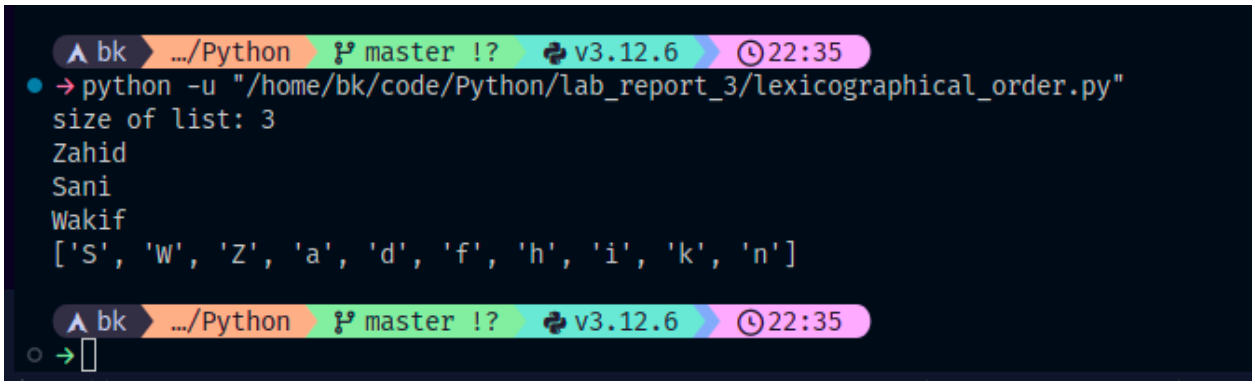
```
    print("\nChoose an option:")
    print("1. Add Item")
    print("2. Remove Item")
    print("3. View Basket")
    print("4. Exit")


    choice = input("Enter your choice (1/2/3/4): ")


    if choice == '1':
        item = input("Enter item: ")
        if item in grocery_items:
            print("already exists")
        else:
            grocery_items[item] = 1
        print("item added")
    elif choice == '2':
        item = input("Enter the item name to remove: ")
        if item not in grocery_items:
            print("item not found")
        else:
            del grocery_items[item]
        print("item removed")


    elif choice == '3':
        if len(grocery_items)==0:
            print("empty")
        else:
```

```
            print("items list:")
        for item, count in grocery_items.items():
            print(f" {item}: {count}")
    elif choice == '4':
        print("Exiting")
        break
    else:
        print("invalid choice")
```

```
bk …/Python master !? v3.12.6 22:25
→ python -u "/home/bk/code/Python/lab_report_3/grocery_shop.py"

Choose an option:
1. Add Item
2. Remove Item
3. View Basket
4. Exit
Enter your choice (1/2/3/4): 1
Enter item: 1
item added

Choose an option:
1. Add Item
2. Remove Item
3. View Basket
4. Exit
Enter your choice (1/2/3/4): 1
Enter item: 2
item added

Choose an option:
1. Add Item
2. Remove Item
3. View Basket
4. Exit
Enter your choice (1/2/3/4): 3
items list:
 1: 1
 2: 1

Choose an option:
1. Add Item
2. Remove Item
3. View Basket
4. Exit
Enter your choice (1/2/3/4): 4
Exiting

bk …/Python master !? v3.12.6 22:30
→
```

9. Lexicographical order

```python
list_size=int(input("size of list: "))
set_of_char=set()
for i in range(list_size):
    new_string=input()
    for char in new_string:
        if char not in set_of_char:
            set_of_char.add(char)

print(sorted(set_of_char))
```



10. Minimum cost

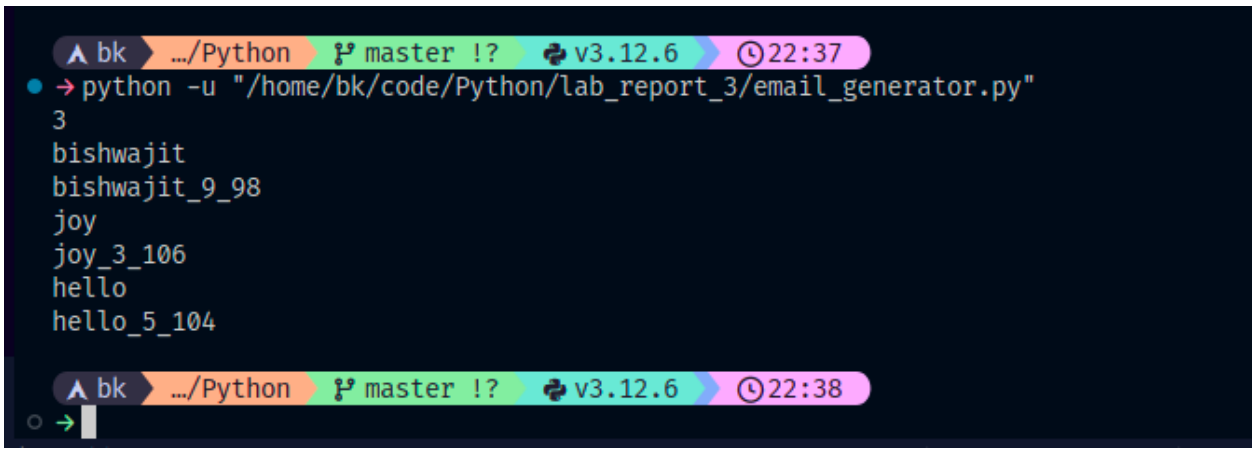
```python
products = {
 "Rice": [45, 42, 41, 40],
 "Salt": [34, 35, 36, 36],
 "Fish": [200, 202, 201, 205],
 "Orange": [100, 99, 101, 102]
}


product=input().capitalize()
```

```
min_price=min(products[product])
place_of_min=products[product].index(min_price)+1
print(f"{product}-> market {place_of_min} = {min_price}")
```

```
bk .../Python master !? v3.12.6 22:35
→ python -u "/home/bk/code/Python/lab_report_3/minimum_cost.py"
rice
Rice-> market 4 = 40

bk .../Python master !? v3.12.6 22:36
→
```

11. Email generator

```
student_number=int(input())


for i in range(student_number):
    name=input()
    name=name.strip()
    if(len(name)>20):
        print("name has more than 20 char")
        continue
    lower=name.lower()
    length=len(name)
    first_char_ascii=ord(name[0])

    email=f'{lower}_{length}_{first_char_ascii}'
    print(email)
```



12. compressed string

```
number_of_string=int(input("enter how many string: "))
size_of_string=int(input("enter size of string: "))


compressed=[]


for i in range(number_of_string):
    string=input()
    if len(string)>size_of_string:
        string=string[:size_of_string]


    new_compressed=''
    count=1
    for i in range(1,len(string)):
        if string[i]==string[i-1]:
            count+=1
        else:
            if count >= 1:
                new_compressed+= str(count)+string[i-1]
            else:
```

```
                new_compressed+=string[i-1]


            count=1
    if count>=1:
        new_compressed+=str(count)+string[-1]
    else:
        new_compressed+=string[-1]


    compressed.append(new_compressed)
print(compressed)
```

```
bk …/Python master !? v3.12.6 22:38
→ python -u "/home/bk/code/Python/lab_report_3/string_compresser.py"
enter how many string: 3
enter size of string: 6
ttyyuu
uuiokjj
rrss
['2t2y2u', '2u1i1o1k1j', '2r2s']
bk …/Python master !? v3.12.6 22:40
→
```

13. To do list

```
dict={}



while True:
    choice = int(input("1 for add task\n2 for mark task
completed\n3 for display all task\n--> "))
    i=1
    if choice==1:
        task=input("add your task: ")
```

```
        dict[i]=[task,False]
        i+=1
    elif choice==2:
        task_no=int(input("enter task no: "))
        dict_list=dict[task_no][1]=True
        print("update done")
        print(dict)
        print()
    elif choice==3:
        print()
        print(dict)
        print()
    else:
        print("wrong choice try again")
```

```
bk …/Python master !? v3.12.6 22:40
→ python -u "/home/bk/code/Python/lab_report_3/to_do_list.py"
1 for add task
2 for mark task completed
3 for display all task
--> 1
add your task: hello
1 for add task
2 for mark task completed
3 for display all task
--> 2
enter task no: 1
update done
{1: ['hello', True]}

1 for add task
2 for mark task completed
3 for display all task
--> 3

{1: ['hello', True]}

1 for add task
2 for mark task completed
3 for display all task
-->
```

14. Rotate password

```python
m=int(input("Size of String m= "))
str=input("Input String:")
n=int(input("Number of characters to rotate:"))
final=""
if " " in str:
    print("no whitespace plz")
else:
    first_part=str[:n-1]
    second_part=str[n-1:]
    final=second_part+first_part
print(final)
```

```
bk .../Python master !? v3.12.6 22:46
→ python -u "/home/bk/code/Python/lab_report_3/rotate_password.py"
Size of String m= 9
Input String:ummeayman
Number of characters to rotate:5
aymanumme
bk .../Python master !? v3.12.6 22:46
→
```

15. Employee system

```python
name_list=["Umme","Eity","Esrat"]



dict={}
asc_list=[]



for i in range(len(name_list)):
    sum=0
```

```
    for j in range(len(name_list[i])):
        asc_value=ord(name_list[i][j])
        sum=sum+asc_value
    dict[name_list[i]]=sum
    asc_list.append(sum)

print(asc_list)
```

```
bk .../Python master !? v3.12.6 22:46
→ python -u "/home/bk/code/Python/lab_report_3/employee_system.py"
[404, 411, 511]

bk .../Python master !? v3.12.6 22:47
→
```

16. Password maker

```
def pass_maker(str):
    if len(str)!=10:
        print("expected password of 10 length")
        return


    upper_str=str[:3].upper()
    lower_str=str[-3:].lower()
    special_str="!@#$"
    return upper_str+special_str+lower_str



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

```
bk …/Python master !? v3.12.6 22:50
→ python -u "/home/bk/code/Python/lab_report_3/password_maker.py"
bishwajitK
BIS!@#$itk

bk …/Python master !? v3.12.6 22:50
→
```

17. Sum of even

```python
x=[3,4,5,7,8,10,'dghf','cbxgc',3.5, 6.2]

sum=0

for i in range(len(x)):

    if type(x[i]) == int and x[i]%2==0:

        sum=sum+x[i]



print(sum)
```

```
bk …/Python master !? v3.12.6 22:50
→ python -u "/home/bk/code/Python/lab_report_3/sum _of_even.py"
22

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