```
# Write a program that
# Store the correct password in a variable.
# Asks the user to enter his/her password
# Validate the two passwords:
# Check if the user has entered a password. If not, then give the
message “ Please enter your password”
# Check if both passwords are the same. If they are the same, show the
message “Correct! The password you entered matches the original
password”.
# Show “Incorrect password” otherwise
```

```
  File
"C:\Users\maanz\AppData\Local\Temp/ipykernel_17884/3257780535.py",
line 2
    Store the correct password in a variable.
          ^
SyntaxError: invalid syntax
```

```
correct_password = 'arivupro@123'
user_entered_pswd = input('Enter your password - ')

if user_entered_pswd == '':
    print("please enter your password")
elif user_entered_pswd == correct_password:
    print('Correct! The password you entered matches the original
password')
else:
    print("Incorrect password")
```

```
Enter your password - 12345
Incorrect password
```

```
list1 = [10,12,9]
list2 = list1.copy()
list2[0] = 50
```

```
list1
```

```
[10, 12, 9]
```

```
list2
```

```
[50, 12, 9]
```

```
list_1 = [3,4,5,6]
s = tuple(list_1)
print(s)
```

```
(3, 4, 5, 6)
```

```
# list, tuple, dict, set, conditional statements
# list - append, extend, index, count, insert, remove, pop, clear,
copy, sort, reverse
# tuple - immutable , indexing slicing , index, count, list(tuple)
# dict - {"key" : "value"}, only immutable date can be the keys
#      - value can be any data type
#      d['key'], .keys, .values, .items, .pop('key'), .popitem(),
clear, copy,
#     update({'key' : 'value'}) , .get(), dict.fromkeys(list)
# set - {10,12} , set cannot store duplicate values, set is
unordered ,
# set can only store immutable types
# add, update, union, intersection, issubset, issuperset , remove,
discard, pop

a = {10,12,9}
b = {12,9}

a.remove(10)
a
```

```
{9, 12}
```

```
a.discard(12)
a
```

```
{9}
```

```
a.remove(120)
```

```
---------------------------------------------------------------------
-----
KeyError                                  Traceback (most recent call
last)
~\AppData\Local\Temp/ipykernel_536/3686854316.py in <module>
----> 1 a.remove(120)

KeyError: 120
```

```
a.discard(120)

b.pop()
```

```
9
```

```
b
```

```
{12}
```

```
# min, max, sum, sorted, len, list+list(concatenation), tuple+tuple,
str + str,
# * - int (multiplicaation), list/tuple/str - > replication
```

```
# conditional statements
# if <condition> :
# ----statements
# else :
# ----statements

# if <condition>  :
# ---- statements
#elif <condition> :
# ---- statements
# elif <condition>:
#---- statements
# .
# .
# else :
# statements

# loops :
# 2 types of loops in python
# 1. for loop
# 2. while loop

# for loop


for i in range(10) :
    print(i)
```

```
0
1
2
3
4
5
6
7
8
9
```

```
list(  range(10) )
```

```
[0, 1, 2, 3, 4, 5, 6, 7, 8, 9]
```

```
# 0, 1, 2, 3, 4, 5, 6 , 7, 8 , 9

s = ['python', 'java']
'python' in s
```

```
True
```

```
list(  range(-10, 10) )
```

```
[-10, -9, -8, -7, -6, -5, -4, -3, -2, -1, 0, 1, 2, 3, 4, 5, 6, 7, 8,
9]
```

```
for x in range(10,15):
    print(x)
```

```
10
11
12
13
14
```

```
list(range(10, 20 , 2))
```

```
[10, 12, 14, 16, 18]
```

```
for y in range(10, 20 , 2) :
    print(y)
```

```
10
12
14
16
18
```

```
# write a program to print odd values from 11 to 20 using for loop.
# write a program to print multiple of 3s between 18 to 30.
```

```
# write a program to print the table of 2
for i in range(1, 11):
    print(2*i)
```

```
2
4
6
8
10
12
14
16
18
20
```

```
# Write a program to print the tabke of 4
```

```
age = 70
```

```
f"The age of person is {age} "
```

```
'The age of person is 70 '
```

```python
# write a program to print the table of 2
for i in range(1, 11):
    print(f"2 X {i} = {2*i}")
```

```
2 X 1 = 2
2 X 2 = 4
2 X 3 = 6
2 X 4 = 8
2 X 5 = 10
2 X 6 = 12
2 X 7 = 14
2 X 8 = 16
2 X 9 = 18
2 X 10 = 20
```

```python
loan_amount_lakhs = [50, 20, 40, 30]

for amount in loan_amount_lakhs :
    print(amount)
```

```
50
20
40
30
```

```python
# write a program to give discount of 10% for items in the below list
item_price = [1500, 4000, 3000]

for x in item_price:
    print(x - (x*0.1))
```

```
1350.0
3600.0
2700.0
```

```python
# write a program to give discount of 15% for items in the below list
item_price = (1500, 4000, 3000)
for x in item_price:
    print(x - (x*0.15))
```

```
1275.0
3400.0
2550.0
```

```python
s = 'python'

for v in s:
    print(v)
```

```
p
y
t
```

```
h
o
n
```

```
a = {10,12,19,20}
```

```
for x in a:
    print(x)
```

```
10
19
12
20
```

```
d = {'loan_1' : 50,
    'loan_2' : 30,
    'loan_3' : 20}
d
```

```
{'loan_1': 50, 'loan_2': 30, 'loan_3': 20}
```

```
for x in d:
    print(x)
```

```
loan_1
loan_2
loan_3
```

```
# Write a program to print the student names and their marks from
below dict
marks = {'john' : 88,
         'roy' : 76}
for x in marks:
    print(x)
```

```
john
roy
```

```
my_dict = {'python' : 33,
          'java' : 44}
my_dict
```

```
{'python': 33, 'java': 44}
```

```
x = 'python'
```

```
my_dict[x]
```

```
33
```

```
my_dict = {'python' : 33,
           'java' : 44}

for x in my_dict:
    print(x)
```

```
python
java
```

```
my_dict2 = {'a' : 10,
            'b' : 30}
for x in my_dict2:
    print(x)
```

```
a
b
```

```
for v in my_dict2:
    print(v)
```

```
a
b
```

```
my_dict2['a']
```

```
10
```

```
x = 'a'
my_dict2[x]
```

```
10
```

```
y = 'a'
my_dict2[x]
```

```
10
```

```
my_dict = {"item_1" : 1200,
           'item_2' : 3400,
           'item_3' : 1250}

for b in my_dict:
    print(b)
```

```
item_1
item_2
item_3
```

```
my_dict3 = {'a' : 40,
            'b' : 70,
            'd' : 70}
```

```python
for c in my_dict3:
    print(c)
```

```
a
b
d
```

```python
# conditional statements in loops
# print only even numbers from the list

my_list = [10,11,15,20]

for x in my_list:
    if x%2==1 :
        print(x)
```

```
11
15
```

```python
my_list = ['python', 'java', 'machine learning', 'data science']

# write a program to find the length of each item of the list
for  x in my_list:
    print(len(x))
```

```
6
4
16
12
```

```python
# print the items whose length is > 10
for  x in my_list:
    if len(x) > 10:
        print(x)
```

```
machine learning
data science
```

```python
# find the count of vowels in the string a, e , i , o , u, A, E, I , O
, U
string = 'manvendra'

c = 0

for i in string :
    if i in 'aeiouAEIOU':
        c = c + 1
```

```
print(c)
```

```
3
```

```
# find the count of consonants in your name
string = 'manvendra'

c = 0

for i in string :
    if i not in 'aeiouAEIOU':
        c = c + 1

print(c)
```

```
6
```

```
# enumerate
my_list
```

```
['python', 'java', 'machine learning', 'data science']
```

```
list(enumerate(my_list))
```

```
[(0, 'python'), (1, 'java'), (2, 'machine learning'), (3, 'data
science')]
```

```
my_list_1 = [10,12,16]
my_list_2 = [11, 20, 40]

list(zip(my_list_1, my_list_2))
```

```
[(10, 11), (12, 20), (16, 40)]
```

```
my_list_1 = [10,12,16]
my_list_2 = [11, 20, 40]
my_list_3 = [101,102]

list(zip(my_list_1, my_list_2, my_list_3))
```

```
[(10, 11, 101), (12, 20, 102)]
```

```
for x in enumerate(my_list):
    print(x)
```

```
(0, 'python')
(1, 'java')
```

```
(2, 'machine learning')
(3, 'data science')
```

```
list(enumerate(my_list))
```

```
[(0, 'python'), (1, 'java'), (2, 'machine learning'), (3, 'data
science')]
```

```
t = (0, 'python')
t
```

```
(0, 'python')
```

```
x, y = t
x
```

```
0
```

```
y
```

```
'python'
```

```
for x,y in enumerate(my_list):
    print(x, y)
```

```
0 python
1 java
2 machine learning
3 data science
```

```
list(zip(my_list_1, my_list_2))
```

```
[(10, 11), (12, 20), (16, 40)]
```

```
for x, y in zip(my_list_1, my_list_2):
    print(x*y)
```

```
110
240
640
```

```
dict(zip(my_list_1, my_list_2))
```

```
{10: 11, 12: 20, 16: 40}
```

```
# break and continue
# break is used to terminate the loop prematurely
```

```
my_list = [1,11,17,19,20,40,47]
```

```python
for i in my_list:
    if i%2 == 0:
        break
    else:
        print(i)
```

```
1
11
17
19
```

```python
# continue
my_list = [1,11,17,19,20,40,47]

for i in my_list:
    if i%2 == 0:
        continue
    else:
        print(i)
```

```
1
11
17
19
47
```

```python
# nested for loop
for i in range(2,6):
    for j in range(1, 11):
        print(f"{i} X {j} = {i*j}")
```

```
2 X 1 = 2
2 X 2 = 4
2 X 3 = 6
2 X 4 = 8
2 X 5 = 10
2 X 6 = 12
2 X 7 = 14
2 X 8 = 16
2 X 9 = 18
2 X 10 = 20
3 X 1 = 3
3 X 2 = 6
3 X 3 = 9
3 X 4 = 12
3 X 5 = 15
3 X 6 = 18
3 X 7 = 21
3 X 8 = 24
3 X 9 = 27
```

```
3 X 10 = 30
4 X 1 = 4
4 X 2 = 8
4 X 3 = 12
4 X 4 = 16
4 X 5 = 20
4 X 6 = 24
4 X 7 = 28
4 X 8 = 32
4 X 9 = 36
4 X 10 = 40
5 X 1 = 5
5 X 2 = 10
5 X 3 = 15
5 X 4 = 20
5 X 5 = 25
5 X 6 = 30
5 X 7 = 35
5 X 8 = 40
5 X 9 = 45
5 X 10 = 50
```

```
# while loop

# while <condition> :
#     statements


a = 0

while a < 11 :
    a = a + 1
    print(a)
```

```
1
2
3
4
5
6
7
8
9
10
11
```

```
# print only even numbers
```

```
a = 0

while a < 6 :
    a = a + 1
    if a%2 == 0 :
        print(a)
```

```
2
4
6
```

```
# break, continue

a = 0
while a < 11 :
    a = a + 1
    if a%3 == 0:
        break
    else:
        print(a)
```

```
1
2
```

```
# break, continue

a = 0
while a < 11 :
    a = a + 1
    if a%3 == 0:
        continue
    else:
        print(a)
```

```
1
2
4
5
7
8
10
11
```

```
# find the highest number from the list using for loop (without using
max function)

list_1 = [12,45,2,8,16]
highest = list_1[0]

for i in list_1:
```

```
    if highest < i :
        highest = i

print(highest)
```

```
45
```

```
# current_min = 12
# current_min > 45
# current_min > 2
#current_min = 2
# current_min > 8
# current_min > 16

list_1 = [12,45,2,8,16]
current_max = list_1[0]

for i in list_1:
    if current_max < i:
        current_max = i

print(current_max)
```

```
45
```

```
# find the minimum value from the list
# find the factorial of any given number - 5



n = 3
f = 1

for i in range(1,n+1):
    f = f*i

print(f)
```

```
6
```