

1) to appened to the list if it is a even number

```
a=[]
for i in range (10):
    n=int(input("enter a number:"))
    if n%2 == 0:
        a.append(b)
print(a)

enter a number:1,2,3,4,5,6,7,8,9
```

```
-----
ValueError                                Traceback (most recent call last)
<ipython-input-11-5592045aef54> in <module>()
      2 a=[]
      3 for i in range (10):
----> 4     n=int(input("enter a number:"))
      5     if n%2 == 0:
      6         a.append(b)
```

ValueError: invalid literal for int() with base 10: '1,2,3,4,5,6,7,8,9'

SEARCH STACK OVERFLOW

2)list comphrension
what is list comphrension?
to create a new list based on the existing list

some examples of list comprehension
1)loop through a list
#print items in a list using a loop
thislist=["book", "laptop", "table"]

Automatic saving failed. This file was updated remotely or in another tab. [Show diff](#)

```
# 2)using a while loop
thislist=["mumbai","banglore","hyderbhad"]
i=0
while i<len(thislist):
    print(thislist[i])
    i=i+1
```

```
# 3) loop using list comprehensive
thislist=["pen","pencil","book","sheets"]
[print(x) for x in thislist]
```

```
# 4) range() function to create an iterrable
newlist=[x for x in range(10)]
print(newlist)
```

5) to print it in a upper case

```
vegetables=["potato","carrot","beans"]
newlist=[x.upper() for x in vegetables]
print(newlist)
```

6) to replace the values

```
fruits=["apple","bannana","orange","cherry","kiwi"]
newlist=[x if x != "bannana" else "mango" for x in fruits]
print(newlist)
```

```
rose
jasmine
lotus
mumbai
banglore
hyderbhad
pen
pencil
book
sheets
[0, 1, 2, 3, 4, 5, 6, 7, 8, 9]
['POTATO', 'CARROT', 'BEANS']
['apple', 'mango', 'orange', 'cherry', 'kiwi']
```

3) a programme to generate a dictionary d which contains (i,i*i) where i is from 1 to n
n= int(input("enter a number:"))

```
d=dict()
for i in range(1,n+1):
    d[i]=i*i
print(d)
```

```
enter a number:5
{1: 1, 2: 4, 3: 9, 4: 16, 5: 25}
```

Automatic saving failed. This file was updated remotely or in another tab. [Show](#)

diff

```
{1: 1, 2: 4, 3: 9, 4: 16}
{1: 1, 2: 4, 3: 9, 4: 16, 5: 25}
```

4) to calculate a distance between the original position and a current position
if the value is in a float then it should be round of to a nearest integer value

```
import math
pos=[0,0]
while true:
    s=float((input()))
    if not s:
        break
    movement=s.split("")
    direction=movement[0]
    steps=int(movement[1])
    if direction=="up":
        pos[0]+=steps
    elif direction=="down":
        pos[0]-=steps
    elif direction=="left":
        pos[1]-=steps
```

```
elif direction=="right":  
    pos[0]+=steps  
else:  
    charged  
  
print(float(round(math.sqrt(pos[1]**2+pos[0]**2))))
```

```
-----  
NameError                                Traceback (most recent call last)  
<ipython-input-8-eea862e5554b> in <module>()  
      5 pos=[0,0]  
      6  
----> 7 while true:  
      8     s=float((input()))  
      9     if not s:
```

NameError: name 'true' is not defined

SEARCH STACK OVERFLOW

Automatic saving failed. This file was updated remotely or in another tab. [Show diff](#)