```
#queston number 1:- create an empty list accept 10 numbers from the user and append to it the
# the  list if it is an even number
num = int(input("enter a number :"))
if (num % 2) == 0:
  print("{0} is even number". format(num))
```

```
enter a number :4
4 is even number
```

```
# question number 2:-list comprehention
# what is list comprehension?
# to create a new list based on the existing list
#some examples of lisy cpmprehension
# 1) loop through a list
# print items in a list using a loop
thislist = ["rose","banglore","hydarabadh"]
for x in thislist:
  print(x)
```

```
rose
banglore
hydarabadh
```

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

```
mumbai
banglore
hyderabad
```

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

```
pen
pencil
book
sheets
[None, None, None, None]
```

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

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


# 5) to print it in a upper
veglist=["potato","carrot","tomoto," "onion","chilli"]
newlist = [print( x.upper()) for x in veglist]
print(newlist)

     POTATO
     CARROT
     TOMOTO,ONION
     CHILLI
     [None, None, None, None]


# 6) to replace the value
statement = " i love my parents"
x = statement.replace("parents","study books")
print(x)

      i love my study books


# question number 3:-
#write a program to generate a dictionary d which contains (i,i*i)
# where i is from 1 to n and print it
num = int(input(" please enter the number: "))
d = {}
for i in range(1,num + 1):
  d[i] = i*i
  print("\n dictionary = ", d)

      please enter the number: 7

      dictionary =  {1: 1}

      dictionary =  {1: 1, 2: 4}

      dictionary =  {1: 1, 2: 4, 3: 9}

      dictionary =  {1: 1, 2: 4, 3: 9, 4: 16}

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

      dictionary =  {1: 1, 2: 4, 3: 9, 4: 16, 5: 25, 6: 36}

      dictionary =  {1: 1, 2: 4, 3: 9, 4: 16, 5: 25, 6: 36, 7: 49}


# question number 4:-
# to calculate a distance between the original position and 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:
```

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    s = float((input(4)))
    if not s:
      break
      movement = s.split("")
      direction = movement[0]
      steps = int(movement[1])
      if direction == "up":
        pos[0] + = 5
        elif direction == " down":
          pos[0] + = 3
          elif direction == " left":
            pos[0] + = 3
            elif direction == "right":
              pos[0] + = 2
              else:
                charged
                print(float(round(math.sqrt(pos[1]**2 + pos[0]**2))))
```

```
# question number 3:-
#write a program to generate a dictionary d which contains (i,i*i)
# where i is from 1 to n and print it
num = int(input(" please enter the number: "))
d = {}
for i in range(1,num):
  d[i] = i*i
  print("\n dictionary = ", d)
```

```
 please enter the number: 3

 dictionary =  {1: 1}

 dictionary =  {1: 1, 2: 4}
```