Untitled45

August 19, 2023

Question(1) Answer 'def' keyword is used to create a function

```
[1]: def test():
         l1=[]
         for i in range(25):
             if i%2==1:
                 l1.append(i)
         return l1
```

```
[2]: test()
```

```
[2]: [1, 3, 5, 7, 9, 11, 13, 15, 17, 19, 21, 23]
```

Question(2) AnswerYou can use *args and **kwargs as arguments of a function. When you are unsure about number of arguments to pass in the functions.

```
[4]: #Examples
```

```
[14]: #*args = behaves as a tuples
      def test1(*args):
          return args
```

```
[11]: test1(1,2,3)
```

```
[11]: (1, 2, 3)
```

```
[7]: test1(1,2,3,"sudh",[4,5,6,7],{1,2,3,4})
```

```
[7]: (1, 2, 3, 'sudh', [4, 5, 6, 7], {1, 2, 3, 4})
```

```
[8]: def test2(*args,a):
         return args,a
```

```
[9]: test2(1,2,3,a=34)
```

```
[9]: ((1, 2, 3), 34)
```

```
[16]: #Examples **kwargs= behaves as a dictionarie
```

```
[17]: def test3(**kwargs):
          return kwargs
```

```
[18]: test3(a=[1,2,3,4],b="sudh",c={5,6,7,8})
```

```
[18]: {'a': [1, 2, 3, 4], 'b': 'sudh', 'c': {5, 6, 7, 8}}
```

Question(3) Answer

```
[20]: #In python, an iterator is an object that allows you to iterate over collection␣
      ↪of data,such as list, touples ,dictionaries and sets
      l=[2,4,6,8,10,12,14,16,18,20]
```

```
[21]: def test4(l):
          l2=[]
          for i in l:
              l2.append(i)
          return l2[:5]
```

```
[22]: test4(l)
```

```
[22]: [2, 4, 6, 8, 10]
```

Question(4) Answer

```
[1]: #A python generator function allows you to declare a function that behaves␣
     ↪likes an iterator, providing a faster and easier way to create iterators
     #Yield keyword is used to create a generator function.
```

```
[5]: def test_fib(n):
         a,b=0,1
         for i in range(n):
             yield(a)
             a,b=b,a+b
```

```
[15]: def test_fib1(n):
          a,b=0,1
          while True:
              yield(a)
              a,b=b,a+b
```

```
[16]: fib=test_fib1(10)
```

```
[17]: for i in range(10):
          print(next(fib))
```

```
0
1
1
2
3
5
8
13
21
34
```

Question(6) Answer

```
[21]: num=int(input("enter your number"))
      a,b=0,1
      counter=0
      while counter<num:
          print(a)
          c=a+b
          a=b
          b=c
          counter=counter+1
```

```
enter your number 10
```

```
0
1
1
2
3
5
8
13
21
34
```

Question(7)Answer

```
[26]: string="pwskills"
```

```
[27]: [i for i in string]
```

```
[27]: ['p', 'w', 's', 'k', 'i', 'l', 'l', 's']
```

Question(9)Answer

```
[29]: [i for i in range(1,100) if i%2==1]
```

[29]: [1,
       3,
       5,
       7,
       9,
       11,
       13,
       15,
       17,
       19,
       21,
       23,
       25,
       27,
       29,
       31,
       33,
       35,
       37,
       39,
       41,
       43,
       45,
       47,
       49,
       51,
       53,
       55,
       57,
       59,
       61,
       63,
       65,
       67,
       69,
       71,
       73,
       75,
       77,
       79,
       81,
       83,
       85,
       87,
       89,

```
 91,
 93,
 95,
 97,
 99]
```

Question (5) and (8) not slove please provide solution