Python

Assignment

part - A

1) keywords are the reserved words in Python. we cannot use a keyword as a variable name, function name or any other identifier.

eg:- while, if, True, or, not, is, and

2) A nested if statement is an if statement placed inside another if statement. we should use nested if when we need to execute each condition step by step

```
eg:- If condition A:
          checks condition A
        ~~If condition B~~:
        If condition B:
            condition B works only if
            condition A is true.
```

3)
```
str = input ("Enter the sentence")
mylist = []
mylist = str.split(" ")
print (mylist)
```

4) we can use list when we need an ordered collection of data and want to modify it at any time of execution. eg:- mylist = [1,2,3,4] (lists are mutable)

~~we~~ we can use tuple when we need an ordered collection ~~but~~ ~~we donot want to change the~~ but we ~~donot want~~ cannot ~~we~~ change the values in the tuple ~~time~~ as tuples are immutable

eg! mytup = (1,2,3,4)

we can use a dictionary to save different items as dictionary is an unordered collection of data that stores data in key- value pairs. They are mutable

eg: mydict = {1:"apple", 2:"Ball"}

5) A package is basically a directory with python files, ~~a file~~ and a file with the name __init__.py. packages are a way of structuring python's modules.

eg:- counting -> Folder name
__init__.py -> File name

from counting import add

```
add.py -> Sub file
def sum(x,y):
    return x+y
```

6)
```
def find(x, y, z):
    sum= x+y
    if sum > z:
        return ~~*~~ x**2 + y**2

    else:
        return 0

x = int(input("Enter the value"))
y = int(input("Enter the value"))
z = int(input("Enter the value"))

res = find(x, y, z)
print(res)
```

7) The advantage of pickling is that it can serialize pretty much any python object, without having to add any extra code. Pickling also refers to converting an object in memory to a byte stream that can be stored on disk.

dump() - dump method of the pickle converts a object into byte stream (serialize).

load() - load method is used to convert byte stream back to python object (deserialize)

8) open() function is used to open internally stored files. It returns the contents of the file as python objects

open (file name, mode)

9) The ~~it~~ --init-- method lets the class initialize the objects attributes. ~~and serves~~ ~~the~~ It is a reserved method in python classes. It is known as a constructor ~~a~~. This method is called when an object is created from class and it allow the class to initialize the attributes of a class

10) Instantiating a class is creating a copy of the class which inherits all class variables and methods. To instantiate a class, we simply call the class as if it were a function, passing the arguments that the --init-- method defines

```
eg:- class add():
         def __init__(self, x,y):
             print(x,y)

     add(3, 4)
```

Part-B

1) a) • Names should start with combination of uppercase or lowercase letters, digits or an underscore

•) An Identifier cannot start with a digit

•) A keyword should not be a Identifier

•) Identifier should not contain special symbols

•) Identifiers should not have space between ~~the~~ two letters and should not be long.

b)
```
num1 = int(input("Enter the starting interval"))
num2 = int(input("Enter the ending interval"))

for item in range (num1, num2):
        if item>1:
              for ~~i~~ num in range (2, item):
                    if num%item==0:
                          break

        else:
              print (num~~s~~)
```

13) a)
```
def addstring(str):
        ~~if length= len(str)~~
        if str[-3:]=='ing':
            str+='ly'
        else:
            str+='ing'
        return str

str=input("Enter the string")
length= len(str)
if length<3:
    print("cannot operate")
else:
    res= addstring(str)
    print(res)
```

b) Mutability of data structures refers to database Structure in which data canbe changed or cannot bechanged. Any data changes can be made are known as mutable data. eg: ~~Tuple~~ list. And data where changes cannot be made are known as immutable data eg! ~~list~~ Tuple

Tuple is immutable and list is mutable which means list can be changed where as tuples cannot bechanged

5) a) A global variable is a variable that is accessible globally. A local variable is one that is only accessible in a particular place or a single function

eg:-

```
num1 = 25  -> global variable
~~def~~ def add():
        num2 = 10  -> local variable
        ~~sum=num1+num2~~

    add()
    print(num1)
```

5) b)
```
def revnum(num):
    revr = 0
    if(num>0):
        Reminder = num%10
        revr = (revr*10) + Reminder
        revnum(num//10)
    return revr

~~revr~~
num = int(input("Enter two number"))
res = revnum(num)
print(res)
```

```
17) a) num=~~0~~1
       count=0
       while True:

              print(num)

              num+=1

              count+=1

              If ~~num~~count==20:

                    break


b) f=open("myFile",'r')

   while True:

          ~~a~~ tst=f.readline()

          if tst==b" ":

                break

          elif tst[0:5]=="PYTHON":

                print(tst)


          else:
               continue
```