

MALLA REDDY COLLEGE OF ENGINEERING & TECHNOLOGY (Autonomous Institution – UGC, Govt. of India)

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DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

INNOVATIVE CLASSROOM TEACHING

2023-24



CODE
CORRECTION

Department of Computer Science and Engineering

Name of the Activity : Code correction

Academic Year : 2023-24

Topic : Python

Code correction is an activity where in the students are given code snippets with errors(syntactic, semantic or runtime). During the activity students identify the error and debug them to retrieve specified output. Each student takes equal participation in the class activity. The activity is used to assess the student's understanding of the subject. It helps in assessing students to what extent they can identify bugs as bugs can make code yield unexpected and wrong results.

Objectives:

1. Enable students to learn python better in an easier way.
2. Enable students to write better code.
3. Enable students to learn debugging and error correction .
4. Enable students to learn how to test a code and generate test case.
5. Enable students to learn how to reduce code complexity and write code efficiently.

Details of Activity:

Sl.No	Class	Section	Faculty	Date
1	II/I	A	Ms.Saritha	16/09/23
2	II/I	B	Mr.HimaKiran	16/09/23
3	II/I	C	Ms.Saritha	16/09/23
4	II/I	D	Mr.Rajesh	15/09/23

CODE CORRECTION QUESTIONS

1. Check or analyze the below code and specify the error and correct the code to get the

Sum of the 2 variables x and y

```
x = "10"  
y = 5  
z = x + y  
print(z)
```

2. The below example should calculate the average of the two numbers when the user input the numbers, mention if there is any error if not correct the code to print the average properly.

```
x = float(input('Enter a number: '))  
y = float(input('Enter a number: '))  
z = x+y/2  
print("The average of the two numbers you have entered is:'z)
```

3. The below code is to print the string in reverse order and correct the code to print the given string in reverse.

```
my_string = "Hello, world!"  
my_string.reverse()
```

Error:

AttributeError: 'str' object has no attribute 'reverse'

Solution :

```
my_string = "Hello, world!"  
reversed_string = my_string[::-1]  
print(reversed_string)
```

4. The below code is to calculate the factorial of a number correct the code to get the correct result.

```
def calculate_factorial(n):  
    result = 1  
    for i in range(1, n):  
        result = result * i  
    return result
```

```
print(calculate_factorial(5))
```

5. The below code is used to find out and print the sum of all the digits of a given number using recursive function Check whether it is printing correct result or not and if not correct the code to get correct results.

```

def sumDigits(num):
    if num == 0:
        return 0
    else:
        return num * 10 + sumDigits(int(num / 10))

# main code
x = 1567
print("Number: ", x)
print("Sum of digits: ", sumDigits(x))

```

6. The below code is used to find out and print the no of notes required to make the denomination for amount in the form of notes Correct the code in such a way that it has to print the no of notes and coins required to find that amount to display the denomination correctly .

```

notes = (2000,500,200,100,50,20,10,5,2,1)

amount = int(input("Enter Amount to be paid : "))

for C in notes:
    count = amount / C
    print("Note Value : ", C, "\tnumber of notes ',count)
    amount = amount%C

```

Amount entered value is 542 it has to print the below output

```

Enter Amount to be paid : 542
Note Value : 2000    number of notes 0
Note Value : 500    number of notes 1
Note Value : 200    number of notes 0
Note Value : 100    number of notes 0
Note Value : 50     number of notes 0
Note Value : 20     number of notes 2
Note Value : 10     number of notes 0
Note Value : 5      number of notes 0
Note Value : 2      number of notes 1
Note Value : 1      number of notes 0

```

7. check the below code and correct the code to print the values of a and b correctly to assign each key value pair to a and b.

```

a, b = {"key1": 1, "key2": 2}
print(a,b)

```

8. The below code prints the specified below output if it is executed

```

for i in range(1,6):
    for j in range(i):
        print(i, end=" ")
    print()

```

Output:

```

1
2 2

```

```
3 3 3
4 4 4 4
5 5 5 5 5
```

To print the below out put which line needed to changed to print the below output:

```
1
1 2
1 2 3
1 2 3 4
1 2 3 4 5
```

9. Analyze the below code and specify what will be the output of the below code.

```
def outer():
    message = 'local'

    # nested function
    def inner():

        # declare nonlocal variable
        nonlocal message

        message = 'nonlocal'
        print("inner:", message)
    inner()
    print("outer:", message)
outer()
```

10. Analyze the code and specify what is the output of the code it will prints and justify why it is giving output

```
s1="ram"
s2="ram"
s3="Ram"
if s1==s2:
    print("equal")
if s1==s3:
    print("Equal")
else:
    print("Not Equal")
```

11. Print AST, SR and GITA by using the following code.

```
String = 'ASTRING'
s1 = slice(3)
s2 = slice(2, 4, 1)
s3 = slice(-1, -10, -1)
print("String slicing")
print(String[s1])
print(String[s2])
print(String[s3])
```

12. Print GEE by using the following code

```
String = 'GEEKSFORGEEKS'
```

```
print(String[::-1])
```

13. Print SEGOSE using the following code

```
String = 'GEEKSFORGEEKS'
```

```
print(String[-1:-1:-4])
```

14. Code to find the sum of squares of each element of the list using for loop

```
numbers = [3, 5, 23, 6, 5, 1, 2, 9, 8]
```

```
sum_ = 0
```

```
for num in numbers:
```

```
    sum_ = sum+ num
```

```
print("The sum of squares is: ", sum_)
```

15. Print the output in the following format [3, 5, 6, 8, 4, 5, 7, 8, 10, 6]

```
my_list = [3, 5, 6, 8, 4]
```

```
for iter_var in range( len[ my_list ] ):
```

```
    my_list.append(my_list[iter_var])
```

```
print( my_list )
```

16. Print the output in the following format

```
Marks of Itika are: 90
```

```
Marks of Parker are: There is no student of name Parker in the records
```

```
student_name_1 = 'Itika'
```

```
student_name_2 = 'Parker'
```

```
records = { 'Itika', 'Arshia', 'Peter' }
```

```
def marks( student_name ):
```

```
    for student in record:
```

```
        if a_student == student_name:
```

```
            return records[ a_student ]
```

```
            break
```

```
    else:
```

```
        return f"There is no student of name {student_name} in the records"
```

```
        print( f"Marks of {student_name_1} are: ", marks( student_name_1 ) )
```

```
print( f"Marks of {student_name_2} are: ", marks( student_name_2 ) )
```

17. Write a python code to print the output as below

```
Empty tuple: ()
```

```
Tuple with integers: (4, 6, 8, 10, 12, 14)
```

```
Tuple with different data types: (4, 'Python', 9.3)
```

```
A nested tuple: ('Python', {4: 5, 6: 2, 8: 2}, (5, 3, 5, 6))
```

```
empty_tuple = []
```

```
print("Empty tuple: ", empty_tuple)
```

```
int_tuple = (4, 6, 8, 10, 12, 14)
```

```
print("Tuple with integers: ")
```

```
mixed_tuple = (4, "Python", 9.3)
```

```
print("Tuple with different data types: ", mixed_tuple)
```

```
nested_tuple = ("Python", {4: 5, 6: 2, 8:2}, (5, 3, 5, 6))
```

```
print("A nested tuple: ")
```

18. Write a python code to print the output as below

```
(4, 5.7, 'Tuples', ['Python', 'Tuples'])
```

```
<class 'tuple'>
```

```
<class 'TypeError'>
```

```
tuple_ = 4, 5.7, "Tuples", ["Python", "Tuples"]
```

```
print(tuple_)
print(type(tuple_))
try:
    tuple() = 4.2
except:
    print[TypeError]
```

19. Print 1 to 10 using while loop

```
i=1
while i<10:
    print(i, end=" ")
    i+=1
```

20. Print the numbers divisible by either 5 or 7 within 1 to 50 using a while loop.

```
i=1
while i<50:
    if i/5 == 0 or i/7==0 :
        print(i, end=" ")
    i+=1
```

21. Find error in the following code(if any) and correct code by rewriting code and underline the correction;-

```
x= int("Enter value of x:")
for in range [0,10]:
if x=y print( x + y)
    else: print( x-y)
```

22. Rewrite the following program after finding and correcting syntactical errors and underlining it.

```
a, b = 0
if (a = b)
a +b = c
print( z)
```

23. Rewrite the following code in python after removing all syntax error(s). Underline each correction done in the code.

```
250 = Number
WHILE Number<=1000:
    if Number=>750
        print (Number)
        Number=Number+100
    else
        print( Number*2)
Number=Number+50
```

24. Rewrite the following code in python after removing all syntax error(s). Underline each correction done in the code.

```
Val = int(rawinput("Value:"))
Adder = 0
```



```

for C in range(1,Val,3)
    Adder+=Cif
    C%2=0:
        Print (C*10)
Else: print
print (C*)

```

25. Rewrite the following code in python after removing all syntax error(s). Underline each correction done in the code.

```

25=Val
for I in the
range(0,Val)if
I%2==0:
    print( I+1)
Else:
    print (I-1).

```

Rewrite the following code in python after removing all syntax error(s). Underline each correction done in the code.

```

STRING=""WELCOME
NOTE""
for S in range[0,8]:
    print (STRING(S))

```

26. Rewrite the following code in python after removing all syntax error(s). Underline each correction done in the code.

```

a=int{input("ENTER FIRST NUMBER")}
b=int(input("ENTER SECOND NUMBER"))
c=int(input("ENTER THIRD NUMBER"))
if a>b and a>c
    print("A IS GREATER")
if b>a and b>c:
    Print(" B IS GREATER")
if c>a and c>b:
    print(C IS GREATER)

```

27. Rewrite the following code in python after removing all syntax error(s). Underline each correction done in the code.

```

i==1
a=int(input("ENTER FIRST NUMBER"))
FOR i in range[1, 11];
    print(a,"*=", i ,"=",a * i)

```

28. Rewrite the following code in python after removing all syntax error(s). Underline each correction done in the code.

```

a="1"
while a>=10:
    print("Value of a=",a)a+=1

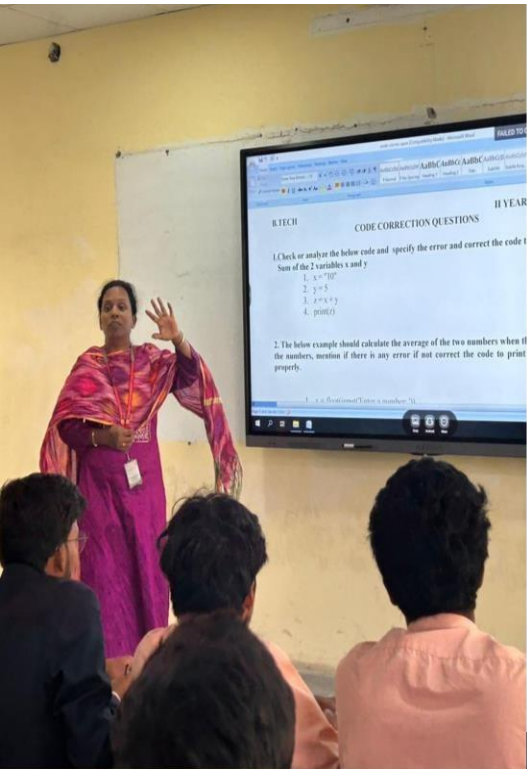
```

29. Rewrite the following code in python after removing all syntax error(s). Underline each correction done in the code.

```
Num=int(rawinput("Number:"))
sum=0
for i in range(10,Num,3)
Sum+=1 if
i%2=0:
    print(i*2)Else:
print(i*3 print Sum)
```

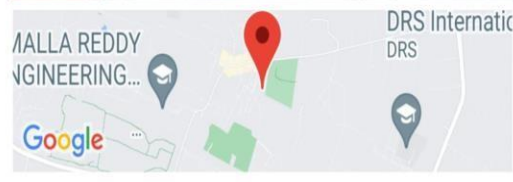
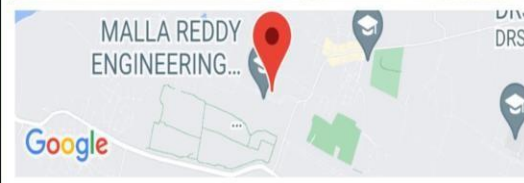
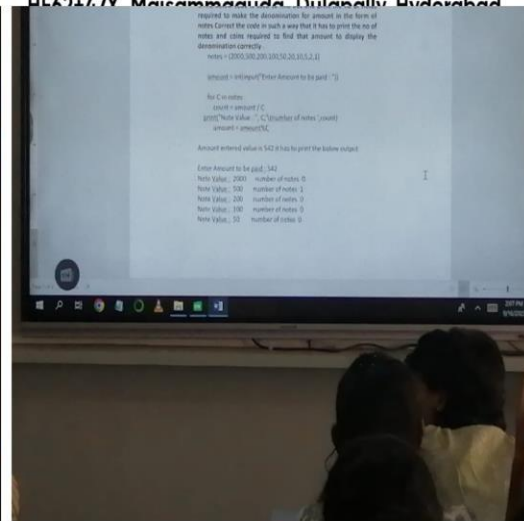
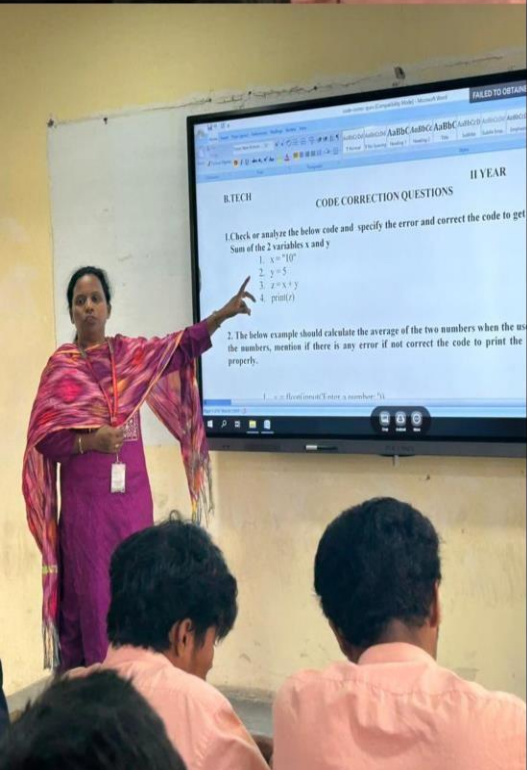
30. Rewrite the following code in python after removing all syntax error(s). Underline each correction done in the code.

```
weather='raining' if
weather='sunny':
print("wear sunblock")elif
weather='snow':
    print("going skiing")
else:
    print(weather)
```



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