DAY-4 MORNING ASSESSMENT

# FUNCTIONS

1.A function is a block of code which is reusable and does not have to write the code multiple times.

2.using def keyword

3.by writing the function name followed by parantheses()

4.To send a result back to the function where it is called.

5.def add\_numbers(x,y):

return x + y

6.parameters are the variables listed in the function definition.Arguments are the actual values passed to the function during the function called.

7.The function wont run.It is stored but ignored unless it is called explicitly.

8.def even\_or\_odd(n):

If num%2==0:

return “even”

else:

return “odd”

9. A default argument is used when no value is provided for a parameter during a functioncall.

def greet(name:"Guest"):  
 print(f"Hello {name}")

10. An argument passed by explicitly naming the parameter in the call.

def greet(name:"Guest"):  
 print(f"Hello {name}")  
 greet(name="vidya")

11. def power(x,n=2):  
 return x\*\*n

12.def square(n):

return n\*n

13.def calculate(a,b):  
 return a+b,a\*b  
sum,product = calculate(2,3)

14.print() displays the result to the screen while return gives the result back to the fuction call.

def show():  
 return "hello"  
msg=show() #returns the value  
def display():  
 print("hello")#only prints

15.A variable declared outside a function is called global variable.

16.A variable declared inside a function is called global variable.It can be used inside a function only.

17. def display(name,age):  
 print(name,age)

18.used as a placeholder when no code is written.It prevents errors when empty code block is written.

19. multiply = lambda x, y: x \* y  
print(multiply(2, 3))

20. def factorial(n):  
 if n == 0 or n==1:  
 return 1  
 else:  
 return n \* factorial(n-1)

# While loop

21.A while loop repeatedly executes a block of code as long as the condition is true

22. i=1  
while i<=5:  
 print(i,end=" ")  
 i+=1

o/p: 1 2 3 4 5

23.A loop that never ends because the condition always remains true.

while True:  
 print("Infinite loop")

24. while True:  
 user\_input = input("Enter a command: ")  
 if user\_input == "exit":  
 break  
 else:  
 print("Infinite loop")

25. i=2  
 while i<=10:  
 print(i,end=" ")  
 i+=2

26.for loop is used when the number of iterations is known. while loop is used when condition based repetition is required.

27. i=1  
while i<=10:  
 if i==1:  
 break  
 print(i)  
 i+=1

28. i=0  
while i<5:  
 i+=1  
 if i==3:  
 continue  
 print(i)

29. i=1  
total=0  
while i<=100:  
 total+=i  
 i+=1  
print(total)

o/p: 5050

30. while True:  
 user\_input = input("Enter something")  
 if user\_input.lower()== "exit":  
 break

O/P: Enter something HI

Enter somethingEXIT

Process finished with exit code 0

31.To ensure the loop control variable exists and starts with a known value , avoiding errors or infinite loops.

32. i=1  
while i<=10:  
 print(f"5 x {i} = {i\*5}")  
 i+=1

o/p: 5 x 1 = 5

5 x 2 = 10

5 x 3 = 15

5 x 4 = 20

5 x 5 = 25

5 x 6 = 30

5 x 7 = 35

5 x 8 = 40

5 x 9 = 45

5 x 10 = 50

33.it becomes an infinite loop

34. i=10  
while i>=1:  
 print(i)  
 i-=1

o/p: 10

9

8

7

6

5

4

3

2

1

35. i=1  
while i<=20:  
 print(i)  
 i+=2

o/p: 1

3

5

7

9

11

13

15

17

19

36. i=1  
while i<=3:  
 print(i)  
 i+=1  
else:  
 print("loop infinite")

37.   
num=123  
rev=0  
while num>0:  
 digit=num%10  
 rev=rev\*10+digit  
 num=num//10  
print("Reversed:",rev)

o/p:321

38.to ensure loop ends.without updating the loop continues infinitely.

39. num=5  
fact=1  
while num>0:  
 fact\*=num  
 num-=1  
print(fact)

40.

num=121  
original = num  
rev=0  
while num>0:  
 digit=num%10  
 rev=rev\*10+digit  
 num=num//10  
  
if original==rev:  
 print("palindrome")  
else:  
 print("not palindrome")