	1. Write a program that takes a year as input. Determine if the year is a leap year. year = int(input("Enter the year:")) if year % 4 == 0: if year % 100 ==0:
	<pre>if year % 100 ==0: if year % 400 == 0: print(f"{year} is leap year") else: print(f"{year} is not leap year") else: print(f"{year} is leap year")</pre>
20	print (f"{year} is not leap year") 023 is not leap year 2. Write a program that takes an integer as input and checks if "The number is divisible by 3 only."
i	<pre>num = int(input("Enter a integer:")) if num % 3 == 0: print(f"{num} is divisible by 3") else: print(f"{num} is not divisible by 3")</pre>
18]: A	2 is not divisible by 3 3. Write a program that takes two numbers as input and prints the smaller of the two A = int(input("Enter first number:")) B = int(input("Enter seconde number:"))
i	<pre>if A>B: print(f"{B} is smaller value") elif A == B: print("Both are equal") else: print(f"{A} is smaller value")</pre>
	4. Write a program that takes two numbers as input and prints the larger of the two A = int(input("Enter first number"))
i	<pre>B = int(input("Enter seconde number")) if A>B: print(f"{A} is larger value") elif A ==B: print("Both are equal values") else: print(f"{B} is larger value")</pre>
	5 is larger value 5. Write a program that takes a single letter as input. Determine if it's a vowel (a, e, i, o, u - consider both uppercase and lowercase) or a consonant.
i	<pre>latter = input("Enter a latter") if len(latter) == 1: if latter in("a", "e", "i", "o", "u", "A", "E", "I", "O", "U"): print(f"{latter} is vowel") else: print(f"{latter} is consonant") else:</pre>
	print ("Please enter the invalid latter in single latter") is vowel 6. Write a program that takes a person's age as input and prints their age category: "Child" (0-12), "Teenager" (13-19), "Adult" (20-64), or "Senior" (65 and above)
i	<pre>age = int(input("Enter age of an person:")) if age in range(0,12): print("child") elif age in range(13,19): print("Teenager") elif age in range(20,64):</pre>
	<pre>print("Adult") else: print("Senior") hild</pre>
i	7. Write a program that takes a password as input. If the length of the password is 8 or more characters, print "Strong password"; otherwise, print "Weak password." password = input ("Enter the password") if len(password) >= 8: print("Strong password") else: print("Weak password")
	trong password Day2
[]:	1. What is a for loop in Python, and when would you typically use it? >> for loop in python: used to iterating over sequences until it meet with the condition that we wants to operate we use typically in sequences like list,tuple,range(),string
[]: #	2. Explain the syntax of a basic for loop in Python # Syntax of for loop: var = " " # variable to declare for i in var: # for condition where (i) = temperory variable to identify, (var) = variable that we declared print(" ") # operation we to pass in for loop
[]: >	3. What is an iterable? Give a few examples of built-in iterables in Python that are commonly used with for loops. >> An iterable is any Python object capable of returning its elements one at a time built-in iretables in python are - list, set, range(), tuple, string, dictionary
[2]: n	4. How can you iterate through the characters of a string using a for loop? names = ["Karan", "Ramesh", "Ganesh", "Suresh"] for char in names:
Ka Ra Ga	ror char in names: print(char) aran amesh anesh uresh
#	5. What is the purpose of the range() function when used with a for loop? Give a simple example # The range() function generates a sequence of numbers, which is especially useful for repeating actions a specific number of times using a for loop. # EX: for i in range(1,10): #range(start, stop, steps to be jump) print(i)
1 2 3 4 5	print(i)
6 7 8 9	6. Can you have a for loop inside another for loop? If so, what is this called?
f	## yes we can use and it is called {nested for loop} for condition: for condition1
	7. What is a while loop in Python, and when would you typically use it? while loop in python is The loop which will keep running as long as the condition is True. The moment the condition becomes False, the loop stops. we use in list,tuple,string,set,dictionary
[]: #	8. Explain the syntax of a basic while loop in Python. What is the condition? # Syntax: while condition: # conditions like comparision
vi	print(" ") operation that we want to repeat # operation like increament or decriment etc. 9. What is an infinite loop? How can you accidentally create one with a while loop, and how can you prevent it?
	infinite loop is a loop where loop will not stop and it will keep going iterating to the unlimited. we can accidentally create one with while loop num = 5 while num > 0: print(f"next number is:{num}")
ne ne ne	<pre>num -= 1 # (num += 1) for infinite loop ext number is:5 ext number is:4 ext number is:3 ext number is:2 ext number is:1</pre>
n	<pre># we can prevent it by using break statement num = 5 while num > 0: print(f"next number is:{num}") num += 1</pre>
[1]: #	10. How do the break and continue statements work within a while loop? # break statement in while loop
W	<pre>i = 15 while i >= 0: print(f"The number is {i}") i -= 1 if i == 10: break</pre>
Th Th Th Th	he number is 15 he number is 14 he number is 13 he number is 12 he number is 11 # continue statement in while loop
n	<pre>num = 10 while num >= 0: print(num) num -= 1 if num == 5: continue</pre>
10 9 8 7 6	<pre>print("Numbers are:") 0</pre>
5 4 3 2 1 0	
C	Day 3 Question.1: Write a program that takes a sentence as input. Capitalize the first letter of the sentence and print the modified sentence. line = input (" ")
Te	print (line.capitalize()) ell me your name? Question.2: Write a program that takes a string as input. Convert the entire string to lowercase and print it.
p hi	line = "HI how ARe you?" print (line.lower()) i how are you? Question.3: Write a program that takes a string as input. Convert the entire string to uppercase and print it
I	line = "I am 2024 PasSoUT StuDent" print (line.upper()) AM 2024 PASSOUT STUDENT Question.4: Write a program that takes a sentence as input. Convert the sentence to title case (where the first letter of each word is capitalized) and print it
I	line = "i gOT cerTified aS data aNalyst from Besant TEchnology" print (line.title()) Got Certified As Data Analyst From Besant Technology Question.4: Write a program that takes a string with leading spaces as input. Remove the leading spaces and print the stripped string.
l p p Be	<pre>line = " hi " line1 = line.lstrip() print("Before removing spaces:",line) print("After removing spaces:",line1) efore removing spaces:</pre>
19]: 1	fter removing spaces: hi Question.5: Write a program that takes a string with trailing spaces as input. Remove the trailing spaces and print the stripped string line = " hi
h Be Af	<pre>print("Before",len(line)) print("After",len(line1)) hi efore 23 fter 3</pre>
20]: l l p	Question.6: Write a program that takes a string with leading and trailing spaces as input. Remove both leading and trailing spaces and print the stripped string. line = " hi " line1 = line.strip() print(line1) print("Before", len(line))
hi Be Af	print ("After", len (line1)) i efore 15 fter 2 Question.7: Write a program that takes a sentence and two words (old and new) as input. Replace all occurrences of the old word with the new word in the sentence and print the result.
1 p	line = "I am working as data analyst is xyz organization.As a data analyst my work is to analyse the raw data and convert it into meaningfull insights" line1 = line.replace("data", "Data") print(line1) am working as Data analyst is xyz organization.As a Data analyst my work is to analyse the raw Data and convert it into meaningfull insights
28]: l	Question.8: Write a program that takes a string and a character as input. Count the number of times the character appears in the string (case-insensitive) using a loop and conditional statements (or directly with count() after converting the string to a single case) line = "I am working as data analyst is xyz organization.As a data analyst my work is to analyse the raw data and convert it into meaningfull insights" linel = line.count("data") print("Number of time data is arrived in line is:", linel) umber of time data is arrived in line is: 3
34]: 1	Question.9: Write a program that takes a string and a substring as input. Find the index of the first occurrence of the substring is not found, print a message indicating that. line = "I am working as data analyst is xyz organization. As a data analyst my work is to analyse the raw data and convert it into meaningfull insights" linel = line.index("data") print(linel)
16 Q [3]: 1	
2 []: n	<pre>print(line.find("t")) num = 5 while num > 0: print(f"next number is:{num}") num -= 1</pre>
[7]: l	Question.11: Write a program that takes a comma-separated string of items as input. Split the string into a list of individual items and print each item. line = "My , name , is ,Ram And I ,am a content , creator" print(line.split(","))
16]: f	'My ', ' name ', ' is ', 'Ram And I ', 'am a content ', ' creator'] Question.12: Write a program that takes a filename as input. Check if the filename ends with ".txt". If it does, print "This is a text file."; otherwise, print "This is not necessarily a text file." file = r"C:\Users\2001a\Desktop\power bi work" print(file.endswith("work")) print(file.ondswith(" trt"))
Tr Fa	print (file.endswith(".txt")) rue alse Questions.13: Write a program that takes a line of text as input. Check if the line starts with "Subject: ". If it does, print "This line is likely an email subject."; otherwise, print "This line does not appear to be an email subject."
i	<pre>line = "subject to learn for data analyst" if line.startswith("subject"): print("This line is likely an email subject") else:</pre>
	print("This line does not appear to be an email subject") his line is likely an email subject
24]: l	Question.14: Write a program that takes a string as input and checks if all characters in the string are alphanumeric. Print "Alphanumeric string" or "Not an alphanumeric string." line = "ABC123" if line.isalnum(): print("Alphanumeric string")
24]: li i e	Augustion.14: Write a program that takes a string as input and checks if all characters in the string are alphanumeric. Print "Alphanumeric string" or "Not an alphanumeric string." line = "ABC123" if line.isalnum(): print("Alphanumeric string") else: print("Not an alphanumeric string") lphanumeric string Question.15: Write a program that takes a string as input and checks if all characters in the string are alphabetic. Print "Alphabetic string" or "Not an alphabetic string."
24]: li i Al (25]: li i	Coustion.14: Write a program that takes a string as input and checks if all characters in the string are alphanumeric. Print "Alphanumeric string" or "Not an alphanumeric string." line = "ABC123" if Ilne.isalahum(): print("Alphanumeric string") else: print("Not an alphanumeric string") Question.15: Write a program that takes a string as input and checks if all characters in the string are alphabetic. Print "Alphabetic string" or "Not an alphabetic string." line = "12achb" if line.isalapha(): print("Rot an alphabetic string") else: print("Not an alphabetic string")
24]: 1 i Al (25]: 1 i e	Austion.14: Write a program that takes a string as input and checks if all characters in the string are alphanumeric. Print "Alphanumeric string" or "Not an alphanumeric string." line = "ABC123" if line.isalnum(): print("Not an alphanumeric string") else: print("Not an alphanumeric string") liphanumeric string Question.15: Write a program that takes a string as input and checks if all characters in the string are alphabetic. Print "Alphabetic string" or "Not an alphabetic string." line = "12asah" if line.isalpha(): print("Alphabetic string") else:
24]: 1 i A1 (225]: 1 i E De	The state is likely an email subject. Question.14: Write a program that takes a string as input and checks if all characters in the string are alphanumeric. Print "Alphanumeric string" or "Not an alphanumeric string." If line = "anci22" if line = state is alloward; print("Alphanumeric string") (Picture of the string as input and checks if all characters in the string are alphabetic. Print "Alphabetic string" or "Not an alphabetic string." Question.15: Write a program that takes a string as input and checks if all characters in the string are alphabetic. Print "Alphabetic string" or "Not an alphabetic string." if line = "124ont" if line input ("Alphabetic string") ct as alphabetic string") ct as alphabetic string. Question.16: Write a program that takes a string as input and checks if all characters in the string are decimal digits. Print "Decimal string" or "Not a decimal string." if ine = "1255" if line input
24]: li i e Al () 25]: li i e De () 30]: li i e	Successor 14. Write a program that takes a string as input and checks if all characters in the string are alphanumeric Print "Aphanumeric string" or "Not an alphanumeric string" Like = "BADCOOP" E TIME ("Aphanumeric String") Like an alphanumeric string as input and checks if all characters in the string are alphanumeric Print "Aphanumeric string" or "Not an alphanumeric string" Like an alphanumeric string as input and checks if all characters in the string are alphanumeric Print "Aphanumeric string" or "Not an alphanumeric string" Like an alphanumeric string as input and checks if all characters in the string are alphanumeric Print "Aphanumeric string" or "Not an alphanumeric string" Like an alphanumeric string as input and checks if all characters in the string are alphanumeric Print "Aphanumeric string" or "Not an alphanumeric string" Like an alphanumeric string as input and checks if all characters in the string are alphanumeric Print "Aphanumeric string" or "Not an alphanumeric string" Like a string as input and checks if all characters in the string are decimal digits. Print "Decimal string" or "Not a decimal string" Like a string as input and checks if all characters in the string are decimal digits. Print "Decimal string" or "Not a decimal string" Like a string as a string as input and checks if all characters in the string are digits. Print "Decimal string" or "Not a digit string" Like a string as a string as input and checks if all characters in the string are digits. Print "Digit string" or "Not a digit string" Like a string as a string as input and checks if all characters in the string are digits. Print "Digit string" or "Not a digit string" Like a string as a string as input and checks if all characters in the string are digits. Print "Digit string" or "Not a digit string" Like a string as a string as input and checks if all characters in the string are digits. Print "Digit string" or "Not a digit string."
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24]:	Cueston 1.6. White a program that taxes a string as input and checks if all characters in the string are aphanument. Print "Aphanument string" or "Not an aphanument string." Line - Maditize of the Control of the Con
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