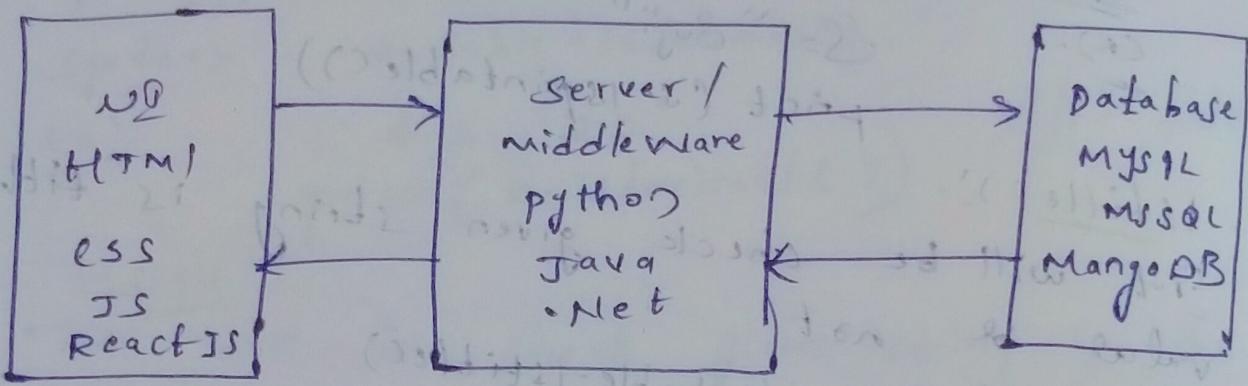


28/9

1. what is a python?
→ python is a framework to develop an application.
- python is a programming language to develop S/W application.
- It is also used for scripting.
- It supports oops concepts.

2. Explain about 3-tier Architecture?



3) what is a server?

Server (middleware) will act as mediator between UI & Database.

- Without a Server we can't able to provide a security.
- In server we can implement logic to control user request and response.

Ex:- pycharm, zupter

What is DB?

Database is used for storage purpose.

- DB will store the physical data.

Ex:- MSSQL, oracle, etc.

5. What is a UI?

User Interface is used to present or display the content in web browser.

6. What are the UI technologies?

UI Technologies are HTML, CSS, Javascript on the top of these UI technologies we can't develop our own libraries or frameworks.

7. What is data type?

Data type acts as a data carrier, which is used to create data type of a variable.

Syntax: `datatype VariableName = data`
`a = "Shoitha"`.

8. Difference b/w data type & variable.

data type (var) Food

Data type is a data carrier, which is used to create data type of a variable.

Syntax: `VariableName = "data"`
`a = 10.`

variable

Variable is used to store the data & values.

Syntax: `VariableName = data`
`a = 10.`

9. How many types of data types?

Data types

Primitive D.T.

Number, character
boolean
None

Binary Oct Dec Hexadecimal

Non-primitive D.T.

List, Set,
Tuple, frozen set

None

String
Array
Object - dictionary
Class

10. Explain about boolean data type?
Boolean data type represents the True or False.

Boolean data type rep in 3 ways.

1. Implicit

2. explicit

3. Data type / variable annotation

Implicit: Based on data type of a variable is created

Syntax:- Variable Name = data

Ex:- a = "Sujitha"

Explicit: Explicitly represents the data type of a variable.

Syntax:- Variable Name = datatype (data)

Ex:- a = bool (True)

Data type / variable Annotation:-

Declaring Data type of a variable

Syntax:- variableName: data type = data

a:bool = "True"

11. How many ways to create a variable in python.

Variable is used to store the data / value.

Syntax:- Variable Name = data

Ex:- a = 10

Variable can be created in 3 ways

1. Implicit

2. Explicit

3. Data type / variable annotation

12. Types of Number Systems?
Number Systems are classified into 4 types.
1. Binary Number System
 2. Octal Number System
 3. Decimal Number System
 4. HexaDecimal Number System.

13. Explain about binary Number System.

→ Binary Number Systems represent 0's + 1's.

→ The base of binary Number System is 2.

→ Binary Number System can be represented in 3 ways

1. Simplicit:- Based to data the data type of a variable is created.

Syntax:- `VariableName = data`

Ex:- `a = 10`

2. Explicit:- Explicitly represents the data type of variable.

Syntax:- `VariableName = datatype(data)`

Ex:- `a = bin(10)`

3. Data type (variable Annotation):- Declaring the data type of a variable.

Syntax:- `VariableName: datatype = data`

`a: bin = 12`

14. Explain about Octal System.

→ Octal Number System represents 0 to 7.
The base of Octal No.s is 10.

→ Octal No.s represents in 3 ways.

1. Implicit: Based on data the data type of a variable is created.

Syntax: VariableName = data.

Ex:- a = 1234

2. Explicit: Explicitly represents the data type of a variable.

Syntax: Variable Name = data type (data)

Ex:- a = Oct(1234)

3. Data type / variable Annotation :-

Declaring data type of a variable.

Syntax: VariableName : data type = data

Ex:- Explain about a : Oct = 1234.

→ hexa decimal Number System

0 to 9 And A to F represent

hexa decimal Number System rep of Ox.

hexa decimal represents in 3 ways

1. Implicit: Based on data the data type of a variable is created.

Syntax: VariableName = data

2. Explicit: a = 4fae.

Explicitly represents the data type of a variable.

Syntax:

Variable Name = data type (data)

a = hex(123456)

3. Data type / variable Annotation :-

Declaring data type of a variable

Syntax: Variable Name : data type = data

Ex:- a : hex = 234.

16. Explain about decimal number system.

- Decimal Number System represents 0 to 9.
- the base of Decimal Number system is 10.
- Decimal Number System is in 3 ways

i. Implicit: Based in data the data type of a variable is created

Syntax:- Variable Name = data type

Ex:- $a = 1234$

ii. Explicit: Explicitly represents the data type of variable

Syntax:- Variable Name = data type (data)

Ex:- $a = \text{hex}(4234)$

iii. Data type / Variable Annotation:

Declaring Data type of a variable

Syntax:- variable Name : data type = data

Ex:- $a : \text{hex} = 1423$

17. Types of Decimal Number system

Decimal Number System are classified into

1. Integer

2. float

3. Complex

4. Exponential

18. Explain about int, float number system.

Integer number system represents non precession values.

It represents in 3 ways.

(i) Implicit: Based in data the d.t of variable is created. $a = 10$ syntax: Ven = data print (a)

2. Explicit:- Explicitly rep. data type of Variable

a = int(10) V.N = datatype(data)

print(a)

3. Data type / variable Annotation :- Declaring data of a variable

a: int = 10 Syntax: VN: d.t = data

print(a)

float:-

→ float represent the precision values.

It rep. in 3 ways.

i) Simplicity:- Based on data the data of variable is created

Syntax:- V.N = data

a = 12.6

print(a)

2. Explicit:-

explicitly rep. data of variable

Syntax:-

Variable Name = datatype(data)

Ex:-

a = float(12)

print(a)

3. Data type / Variable Annotation :- Declaring the data of variable.

Syntax:- Variable Name: datatype = data

Ex:-

a: float = 12.6

print(a).

Q. Explain about exponential exponential No.
Represent of long Number short form
of float numbers!

Ex:- num = float(123456789123456789e10)

print(num).

rep by num e^{in} . Here n is no. of times

Ex:-

$$a = 1+2e^2$$

print(a)

20. what is complex number system and where we are using.

→ Complex number System is used to calculate the imaginary number.

→ It rep by $a+bj$, here a is imaginary & b is real part.

Ex:- $a = 1+2j$

$$b = 4+3j$$

print(a+b)

Explicit - $a = \text{complex}(1)$

or print(a)

Data type / variable Annotation:-

$a : \text{complex} = 1$

print(a)

21. what is string

String is a series or collection of character

22. How many ways to represent a string?

There are 3 ways

1. Implicit $\text{print}' + ..'$ single quotes

2. Double quotes.

3. Explicit $\text{print}' + ..'$

3. Data type / Variable Annotation.

23. How many ways to rep string data?

There are 2 ways to rep string data

1. Single line.

2. Multi-line.

Ex:- ~~# single line string~~
⇒ $a = "Sujit"$
~~# Multiline~~ $a = \text{'''Kesavupalli,}$

Dachepalli (m)

24. How many ways to represent string data types.

There are 3 ways

1. Implicit
2. Explicit
3. Data type / Variable Annotation.

25. How to check string length?

By using len() function to check the length of String

Ex:- $a = Sujit$
`print(len(a))`

26. What is concatenation and explain about Concatenation techniques?

By using joining and append the string

1. Operator overloading

2. f' string / Interpolation

3. String join method

27. What is String concatenation & explain about String concatenation techniques.

String concatenation means Joining or appending two strings is called String concatenation.

There are 3 ways to join the string

1. Operator overloading

2. + string / Interpolating

3. String join method

1. Operator overloading - By using + operator we can append (Join two strings).

Syntax:- `str1 + str2`

Ex:-

`a = "Sujitha"`

`b = "Swami"`

`print(a+b)`

2. fstring (Interpolation) - Join/append the string by using fstring (Interpolation).

→ It represented by {}

Syntax:- `f"{}{str1}{str2}"`

Ex:- `fName = "Suji"`

`lName = "Swami"`

`fullname = f"{}{fName}{lName}"`

`print(fullname)`.

3. String Join method:-

By using Join method we can join the string.

Syntax:- `joining.character.join(tuple)`

`fName = "Suji"`

`lName = "Swami"`

`a = (fName, lName)`

`print(" --- Hi ---").join(a)`

28. what is Overloading:-

Overloading means different behaviour operator behave differently at different situation.

→ + operator perform addition b/w the numbers & append b/w the string.

29. String split method:-

String split methods are 4 methods.

i. split():

It is used to split the string by using a specific char/str.

Syntax:- VariableName = split (char/ str)

Ex:-

a = "suji@gmail.com"

print (a.split("@"))

2. splitlines():

It is used to split the string by the lines.

Syntax:- VariableName = splitlines()

Ex:- a = str = ""

"1+1=kesareupalli,

Dacherpally (m),

pelaa du

3. partition():

It is used to partition the string by using character of a string.

Syntax:- VariableName.partition (char/str)

Ex:- a = "suji@gmail.com"

print (a.partition ("@"))

4. rpartition:

It is same as partition, but it will be take from Right to left

Syntax:-

Ex:- variableName = rpartition (char/str)

a = '@sujis@gmail.com'

print(a.rpartition('@')).

30. Difference between partition & rpartition

partition	rpartition
<p>1. partition is used to split the string by using character of string.</p> <p>It takes from left to right.</p> <p><u>Syntax:-</u> VN = partition (char/str)</p> <p><u>Ex:-</u> a = "@sujis@gmail.com". print(a.partition('@'))</p>	<p>1. It is same as partition, but it will taken from Right to Left.</p> <p><u>Syntax:-</u> VN = rpartition (char/str)</p> <p><u>Ex:-</u> a = "@sujis@gmail.com". print(a.rpartition('@'))</p>

31. Explain about String functions

1. Capitalize:

First character in the word of given string should be Capital

Syntax:- variableName.capitalize()

Ex:- a = "Hello world"
print(a)

2. title:

Each character in the word of given string become Capital

Syntax:- VN.title()

Ex:- a = "Hello world"
print(a)

3. upper():

It will be convert the upper of given string.

Syntax:- $V.N = \text{upper}()$

Ex:- $a = "hello"$
 $= \text{print}(a.\text{upper}())$

4. lower():

The given string should be converted to lower case.

Syntax:- $V.N = \text{lower}()$

Ex:- $a = "HELLO"$
 $= \text{print}(a.\text{lower}())$

5. casefold():

It is same as lower, but it should not be converted as Greek words.

Syntax:- $V.N = \text{casefold}()$
 $= \text{print}(a.\text{casefold}())$

6. swap():

It should be convert as upper should be lower & lower should be upper.

Syntax:- $V.N = \text{swap}()$ $a = "Hello"$
 $= \text{print}(a.\text{swap}())$

32. String check function:

1. isnumeric():

It will be the check the given string is num value or not

Syntax:- $V.N = \text{isnumeric}()$

Ex:- $a = "Sujit"$
 $= \text{print}(a.\text{isnumeric}())$

2. Isalnumeric() :-

It will be check the given string is alphabetic or numeric value or not.

Syntax:-

Ex:-

V.N. Isalnumeric()
a = "Sujil23"

print (a.isalnumeric()).

3. Istitle():

It will be check the given string is title value or not.

Syntax:-

Ex:-

V.N. Istitle()

a = "Hello Sujil"

print (a.istitle())

4. Isupper() :-

It will be check the given string is upper value or not.

Syntax:-

Ex:-

V.N. Isupper()

a = "HELLO"

print (a.isupper())

5. Islower() :-

It will be check the given string is lower value or not.

Syntax:-

Ex:-

V.N. Islower()

a = "hello"

print (a.islower())

6. Isidentifier() :-

It will be check the given is identifier value or not.

Syntax:-

Ex:-

V.N. Isidentifier()

a = "hello"

print (a.isidentifier())

7. Isprintable() :-

It will be check the string is printable value or not.

Syntax:-

Ex:-

V.N. Isprintable()

a = "hello"

print (a.isprintable())