

Class : VIII

Topic : play with python

Month : August - 2026

Notes of Lesson

Answer the following questions :

1. What are the various datatypes in python ?
Give two examples of each.

Ans: The following are the various datatypes

1. **String Type** - The values of Student and School are all text. These variables are known as String type variables. String is abbreviated str. This datatype includes alphabets, numbers, spaces and special characters like "no", "nice", "brave!", "551", etc.
2. **Integer Type** - The values of Grade and Age are all integers. These variables are known as integer type variables abbreviated as int. Integers include all the whole numbers (0, 1, 2, 3, etc) and the negatives (-1, -2, -3) etc.

3. Float Type - In the variables Marks and Height the values are numbers with decimals. These variables are known as float type variables. This type includes all decimal numbers, both positive and negative like 0.5, 3.14, -4.8, -1001.2 etc.

4. Boolean Type - In the variables Scholarship and Attendance the values can have only two possible values. These variables are known as "Boolean" type variables. Boolean type is abbreviated bool, and includes data of the kind yes/no, on/off, Enable/Disable and 1/0, represented using True/False.

5. List Type: Sometimes, we have a collection of different types of data in one variable. Such a variable is of data type known as list.

2. What is string concatenation?

Ans: It is done using + sign.

Eg: First name = "Sachin", Last name = "Tendulkar"

Full name = First name + Last name =
Sachin Tendulkar.

3. what are lists in python?

Ans: We save a collection of different types of data in one variable. Such a variable is of datatype known as list.

4. why is type casting required in python?

Ans: Type casting is required to convert one data type into another so that operations can be performed correctly.

5. what is the type() function in python?

Ans: Type function is useful to find the data type of a variable.

The Syntax is :

`type(variable_name)`

To display the data type of a variable it is used alongside `print()`, as shown here:

`print(type(variable_name))`

II Competency Based Questions :

1. A food-delivery app shows a restaurant's rating as 4.8 out of 5. A Variable of

which datatype should store this rating?

Ans: float datatype.

Chapter 4: If you think for a while
Loops and conditionals in python

I Answer the following:

1. what is the difference between an if and an if-else statement?

Ans: An if statement executes a block of code only when the condition is true.

An if-else statement executes one block when the condition is true and another block when the condition is false.

2. How does a for loop work?

Ans: A for loop repeats a set of statements for each value in a given sequence or range. It is generally used when

the number of repetitions is known.

3. what is the main difference between a for loop and a while loop?

Ans: A for loop is generally used when the number of repetitions is known whereas a while loop continues as long as its conditions remains true.

4. what is a nested loop?

Ans: A nested loop is a loop placed inside another loop.

5. Write the syntax for the "for" loop and the "while" loop.

Ans: The for loop allows to repeat the same set of commands a fixed number of times.

The Syntax for the for loop is as follows

for i in range (x, y, z) :
 ↓ ↗ ↘
Start value Stop value Step value

↳ Loop variable

Statement → Actions to be repeated.

→ The loop variable governs the running of the loop based on the range.

→ Usually, programmers use "i" as the loop variable, but any valid variable name can be used, like Num, Num_1, a, etc.

→ The range has three numbers: Start, Stop, and step. All of them must be whole numbers.