1. **What are the rules in declaring the variables in python**.

Ans: As Python has certain variable naming conventions. While some of those are rules that produce syntax errors if broken, others are simply considered to be good.

Rules:

- A variable can consist of upper- and lowercase letters, the digits 0-9 and the underscore character.
- The first character of a variable cannot be a digit.
- Keywords like if or the Boolean True are reserved and cannot be used as variable names.
- Variables are case-sensitive; therefore x is different from X.

2. **Explain type casting in python**.

Ans: Typecasting in Python allows programmers to convert variables or data from one data type to another. It enables smooth manipulation of data. Typecasting in Python can be very useful in dealing with large data sets where the data is present in different data types.

Python offers two ways to perform typecasting. Here we will discuss both,

1. **Implicit type conversion**
2. **Explicit type conversion**

Implicit Type Conversion in Python:

In Python, implicit typecasting is automatically performed. During the implicit type conversion, the user is not supposed to mention any specific data type during the conversion.

Explicit Type Conversion in Python:

Python allows us to explicitly typecast the data type of a variable using the in-built functions. In explicit type conversion in Python, the user is supposed to pass the value in a function to obtain the required data type.

int(): Converts a value to an integer.

float(): Converts a value to a floating-point number.

str(): Converts a value to a string.

bool(): Converts a value to a Boolean (True or False).

list(): Converts an iterable to a list.

tuple(): Converts an iterable to a tuple