ASSAIGHNMENT -1

‘What is a variable in Python?

a) A reserved keyword

b) A data type

c) A named storage location for data

d) An operator

Which of the following is a valid Python variable name?

a) 123variable

b) my-variable

c) \_variable

d) break

What is the maximum length of a variable name in Python?

a) 64 characters

b) 128 characters

c) There is no maximum length

d) 256 characters

Which data type is used to represent whole numbers in Python?

a) float

b) string

c) int

d) boolean

What is the result of the expression 5 / 2 in Python?

a) 2.5

b) 2

c) 2.0

d) 2.5 with truncation

Which of the following is an example of a boolean data type in Python?

a) "True"

b) 42

c) 3.14

d) True

What does the None data type represent in Python?

a) An empty string

b) A value that indicates "unknown" or "missing"

c) Zero

d) An error

Which data type is used to represent a sequence of characters in Python?

a) char

b) string

c) text

d) sequence

What is the output of the following code?

python

Copy code

x = 5

y = "10"

z = x + y

print(z)

a) 15

b) "15"

c) Error

d) 510

Which data type is used to store a collection of items that are ordered and changeable in Python?

a) list

b) tuple

c) set

d) dictionary

What is the purpose of an "if" statement in Python?

a) To declare a variable

b) To define a function

c) To conditionally execute code

d) To create a loop

Which of the following is true about the "elif" statement in Python?

a) It must be followed by an "else" statement.

b) It is used to check multiple conditions sequentially.

c) It can only be used once in an "if" block.

d) It is equivalent to the "else" statement.

In Python, which symbol is used to represent "not equal to" in a conditional statement?

a) !=

b) ==

c) <>

d) =

What is the result of the following code?

python

Copy code

x = 5

if x > 3:

print("Hello")

a) "Hello"

b) Nothing will be printed

c) Error

d) "World"

While Loops:

What is the primary purpose of a "while" loop in Python?

a) To execute a block of code a specified number of times.

b) To create an infinite loop.

c) To conditionally execute a block of code repeatedly.

d) To define a function.

What will the following code do?

python

Copy code

i = 0

while i < 5:

print(i)

i += 1

a) Print numbers from 0 to 5

b) Print numbers from 1 to 5

c) Create an infinite loop

d) Print numbers from 0 to 4

What is the purpose of the "break" statement in a while loop?

a) It ends the entire program.

b) It skips the current iteration and continues with the next one.

c) It ends the loop prematurely.

d) It restarts the loop from the beginning.

In a while loop, what is the purpose of the "continue" statement?

a) It ends the loop.

b) It exits the program.

c) It skips the remaining code in the current iteration and starts the next one.

d) It restarts the loop.

1. Write a Python program that checks if a given number is even or odd. The program should take an integer as input and print "Even" or "Odd" based on the input.
2. Write a program that takes a user's age as input and determines whether they are a child (0-12 years), teenager (13-19 years), or an adult (20 years or older).
3. Write a Python program that uses a while loop to print numbers from 1 to 5.