Exercise 2 Answers:

1. A variable is used to store data values in memory.
2. pi = 3.142
3. question?
4. 35
5. The value of age is 35.
6. total *= 100
7. result = 20
8. True and False
9. float
10. str
11. The type of the value assigned to the variable.
12. It returns the data type of the value or variable passed to it.
13. <class 'float'>
14. Dynamic Typing
15. print(answer)
16. Arguments
17. It takes input from the user as a string.
18. str
19. print("Name: Kapish Sah")
    print("Address: Kathmandu, Nepal")

20. print('Hello, is your name "Bwian"?')

21. print("Or is your name 'Woger'?")

22. print("This is a string containing a backslash (\\),
    \n a single quote ('), a double quote (\"),
    \n and is split across multiple lines")

23. print("""This is a string containing a backslash (\\),
    a single quote ('), a double quote ("),
    and is split across multiple lines""")

24. fahrenheit = float(input("Enter temperature in Fahrenheit: "))
    celsius = (fahrenheit - 32) * 5/9
    print(f"{fahrenheit}°F is equal to {celsius:.2f}°C")

25. a = float(input("Enter value for a: ")
    b = float(input("Enter value for b: "))

    print(f"The value 'a' was {a} and the value 'b' was {b}")
    print(f"The sum of 'a' and 'b' is {a + b}")
    print(f"The product of 'a' and 'b' is {a * b}")

26. x = input("Enter first value: ")
    y = input("Enter second value: ")
    z = input("Enter third value: ")

    print("The largest value is:", max(x, y, z))

27. value1 = input("Enter the first value: ")
    value2 = input("Enter the second value: ")
    value3 = input("Enter the third value: ")

    # Use the max() function to display the largest value
    print("The largest value is:", max(value1, value2, value3))

28. name = "Black Knight"

    print(name[0]) → B

    print(name[4]) → k

    print(name[-1]) → t

    print(name[-2]) → h

    print(name[2:5]) → ack

print(name[6:]) → Knight
print(name[:5]) → Black
print(name[:]) → Black Knight

29. names = ["Mark", "Jon", "Amanda", "Edward", "Sally"] . It creates a variable containing list.
30. Yes, it is valid. Lists in Python can store mixed data types.
31. Yes, the value is mutable and can be modified.
32. Immutable
33. List is Mutable.
34. String is Immutable.

35. names = ["Terry", "John", "Michael", "Eric", "Terry", "Graham"]
print(names[2]) → Michael

print(names[-2]) → Terry

print(names[0:3]) → ['Terry', 'John', 'Michael']

After names = names + "Brian", Python will raise a TypeError because you cannot concatenate a list and a string.

After names[0:1] = ["Mark", "Jon"], the list becomes:
['Mark', 'Jon', 'John', 'Michael', 'Eric', 'Terry', 'Graham'].

36. len()