Practice Questions

Question 1: Variable Assignment

Create a Python program that assigns the values `25` to a variable named `age`, `"Shivam"` to a variable named `name`, and `3.14` to a variable named `pi`. Print the values of these variables.

Solution:

```
# Create a file named variables.py and paste the following code:
age = 25
name = "Shivam"
pi = 3.14

# Print the values of the variables
print("Age:", age)
print("Name:", name)
print("Pi:", pi)
```

Question 2: Data Types

Write a Python program to demonstrate the use of different data types. Create a variable for each of the following data types and print their types using the `type()` function: an integer, a float, a string, and a boolean.

Solution:

```python
# Create a file named data_types.py and paste the following code:
integer_var = 10
float_var = 3.14
string_var = "Hello"
boolean_var = True

# Print the type of each variable
print(type(integer_var))  # Output: <class 'int'>
print(type(float_var))    # Output: <class 'float'>
print(type(string_var))   # Output: <class 'str'>
print(type(boolean_var))  # Output: <class 'bool'>
```

Question 3: Typecasting

Write a Python program that converts a string `"123"` to an integer, a float `45.67` to an integer, and an integer `99` to a string. Print the converted values.

Solution:

```python
# Create a file named typecasting.py and paste the following code:
string_to_int = int("123")
float_to_int = int(45.67)
int_to_string = str(99)

# Print the converted values
print("String to Integer:", string_to_int)
print("Float to Integer:", float_to_int)
print("Integer to String:", int_to_string)
```

Question 4: Using Operators

Write a Python program that performs the following operations:

1. Add 7 and 3.
2. Subtract 10 from 20.
3. Multiply 4 by 5.
4. Divide 20 by 4 and print the results.

Solution:

```python
# Create a file named operators.py and paste the following code:
add_result = 7 + 3
subtract_result = 20 - 10
multiply_result = 4 * 5
divide_result = 20 / 4

# Print the results of the operations
print("Addition:", add_result)
print("Subtraction:", subtract_result)
print("Multiplication:", multiply_result)
print("Division:", divide_result)
```

Question 5: Input and Comments

Write a Python program that asks the user for their favorite number and prints a message saying "Your favorite number is X", where X is the number provided by the user. Add comments to explain each part of the code.

Solution:

```python
# Create a file named user_input.py and paste the following code:
# Ask the user for their favorite number
favorite_number = input("Enter your favorite number: ")

# Print a message with the user's favorite number
print("Your favorite number is", favorite_number)
```