first

August 5, 2024

1 1. Write a Python program that takes an integer input from the user and prints “Positive” if the number is greater than zero.

[11]:
```
# Take an integer input from the user
number = int(input("Enter an integer: "))

# Check if the number is greater than zero
if number > 0:
    print("Positive")
```

```
Enter an integer:  4
```

```
Positive
```

2 2. Write a Python program that takes an integer input from the user and prints “Even” if the number is even, and “Odd” if the number is odd.

[9]:
```
# Take an integer input from the user
number = int(input("Enter an integer: "))

# Check if the number is even or odd
if number % 2 == 0:
    print("Even")
else:
    print("Odd")
```

```
Enter an integer:  4
```

```
Even
```

3 3. Write a Python program that takes an integer input from the user and prints “Positive”, “Negative”, or “Zero” based on the value of the input.

[14]:
```
# Take an integer input from the user
number = int(input("Enter an integer: "))

# Check if the number is positive, negative, or zero
if number > 0:
    print("Positive")
elif number < 0:
    print("Negative")
else:
    print("Zero")
```

```
Enter an integer:  0
```

```
Zero
```

4 4. Write a Python program that takes an integer input from the user and prints a grade based on the following criteria: 90 and above: A 80 to 89: B 70 to 79: C 60 to 69: D Below 60: F

[21]:
```
# Take an integer input from the user
score = int(input("Enter the score (0-100): "))

# Determine the grade based on the score
if score >= 90:
    print("A")
elif score >= 80:
    print("B")
elif score >= 70:
    print("C")
elif score >= 60:
    print("D")
else:
    print("F")
```

```
Enter the score (0-100):  99
```

```
A
```

5 5. Write a Python program that uses a while loop to print numbers from 1 to 10.

[28]:
```
# Initialize the counter
number = 1

# Loop to print numbers from 1 to 10
while number <= 10:
    print(number)
    number += 1
```

```
1
2
3
4
5
6
7
8
9
10
```

6 6. Write a Python program that uses a for loop to iterate through a list of integers and prints each number.

[46]:
```
# Define a list of integers
numbers = [1, 2, 3, 4, 5, 6, 7, 8, 9, 10]

# Iterate through the list and print each number
for number in numbers:
    print(number)
```

```
1
2
3
4
5
6
7
8
9
10
```

7 7. Write a Python program that calculates the sum of all numbers from 1 to 100 using an appropriate loop structure

[52]:
```
# Initialize the sum variable
total_sum = 0

# Calculate the sum of numbers from 1 to 100 using a for loop
for number in range(1, 101):
    total_sum += number

# Print the result
print(f"The sum of numbers from 1 to 100 is: {total_sum}.")
```

```
The sum of numbers from 1 to 100 is: 5050.
```

8 8. Write a Python program that uses nested loops to print the following pattern:

9 # # * # * * # * * * *

[65]:
```
# Number of rows in the pattern
rows = 5

# Outer loop for each row
for i in range(1, rows + 1):
    # Inner loop to print stars in each row
    for j in range(i):
        print("*", end=" ")
    # Move to the next line after printing stars in the current row
    print()
```

```
*
* *
* * *
* * * *
* * * * *
```

10 9. Write a Python program that uses a for loop to print numbers from 1 to 10, but breaks out of the loop when the number is equal to 5.

[72]:
```
# Iterate through numbers from 1 to 10
for number in range(1, 11):
    # Print the current number
    print(number)
```

```
    # Break out of the loop if the number is 5
    if number == 5:
        break
```

```
1
2
3
4
5
```

11 10. Write a Python program that defines a function using the pass statement. The function should be named do_nothing.

[80]:
```
def do_nothing():
    pass
```

12 11. Write a Python program that uses a for loop to search for a number in a list. If the number is found, print “Found”, otherwise print “Not Found” after the loop completes.

[101]:
```
# Define the list of numbers
numbers = [10, 20, 30, 40, 50]

# Define the number to search for
search_number = 20

# Initialize a flag to indicate whether the number is found
found = False

# Search for the number in the list
for number in numbers:
    if number == search_number:
        print("Found")
        found = True
        break

# If the number was not found, print "Not Found"
if not found:
    print("Not Found")
```

```
Found
```

13 12. Write a Python program that creates a tuple with five elements and prints each element using a for loop.

[97]:
```
# Create a tuple with five elements
my_tuple = (10, 'apple', 3.14, True, 'banana')

# Iterate through the tuple and print each element
for element in my_tuple:
    print(element)
```

```
10
apple
3.14
True
banana
```

14 13. Write a Python program that creates a list of five elements, adds a new element to the list, and prints the updated list.

[127]:
```
# Create a list with five elements
my_list = [1, 'hello', 3.14, True, 'world']
list_2 = ['new_element']
# Add a new element to the list
my_list+= list_2

# Print the updated list
print(my_list)
```

```
[1, 'hello', 3.14, True, 'world', 'new_element']
```

15 14. Write a Python program that creates a dictionary with three key-value pairs, adds a new key-value pair, and prints the updated dictionary.

[135]:
```
# Create a dictionary with three key-value pairs
my_dict = {
    'name': 'python',
    'age': 20,
    'city': 'Nashik'
}

# Add a new key-value pair to the dictionary
my_dict[input("enetr a category")] = input("enter answer")

# Print the updated dictionary
```

```
print(my_dict)
```

```
enter answer python
enetr a category subject
```

```
{'name': 'python', 'age': 20, 'city': 'Nashik', 'subject': 'python'}
```

[ ]: