

Exercises

- 1) Write a program to check if a given string is a palindrome using the ternary operator.
- 2) Write a program to find the largest among four numbers using the ternary operator.
- 3) Write a program to find the smallest among four numbers using the ternary operator.
- 4) Write a program to check if a given number is positive, negative, or zero using the ternary operator.
- 5) Write a program to check if a given number is a multiple of 2, 3, or 5 using the ternary operator.
- 6) Write a program to check if a given number is a perfect square using the ternary operator.
- 7) Write a program to check if a given string is a valid identifier using the ternary operator.
- 8) Write a program to find the absolute value of a given number using the ternary operator.
- 9) Write a program to find the sum of two numbers using the ternary operator.
- 10) Write a program to find the difference of two numbers using the ternary operator.

Exercises and solution

- 1) Write a program to check if a given string is a palindrome using the ternary operator.

```
s = input("Enter a string: ")
palindrome = True if s == s[::-1] else False
if palindrome:
    print(s, "is a palindrome.")
```

```
else:  
    print(s, "is not a palindrome.")
```

- 2) Write a program to find the largest among four numbers using the ternary operator.

```
a = int(input("Enter first number: "))  
b = int(input("Enter second number: "))  
c = int(input("Enter third number: "))  
d = int(input("Enter fourth number: "))  
largest = a if (a > b and a > c and a > d) else (b if (b > c and b > d)  
else (c if c > d else d))  
print("The largest number is", largest)
```

- 3) Write a program to find the smallest among four numbers using the ternary operator.

```
a = int(input("Enter first number: "))  
b = int(input("Enter second number: "))  
c = int(input("Enter third number: "))  
d = int(input("Enter fourth number: "))  
smallest = a if (a < b and a < c and a < d) else (b if (b < c and b < d)  
else (c if c < d else d))  
print("The smallest number is", smallest)
```

- 4) Write a program to check if a given number is positive, negative, or zero using the ternary operator.

```
num = int(input("Enter a number: "))  
result = "Positive" if num > 0 else ("Negative" if num < 0 else  
"Zero")  
print("The number is", result)
```

- 5) Write a program to check if a given number is a multiple of 2, 3, or 5 using the ternary operator.

```
num = int(input("Enter a number: "))
result = "Multiple of 2" if num % 2 == 0 else ("Multiple of 3" if
num % 3 == 0 else ("Multiple of 5" if num % 5 == 0 else "Not a
multiple of 2, 3, or 5"))
print(result)
```

- 6) Write a program to check if a given number is a perfect square using the ternary operator.

```
num = int(input("Enter a number: "))
result = "Perfect square" if (num**0.5).is_integer() else "Not a
perfect square"
print(result)
```

- 7) Write a program to check if a given string is a valid identifier using the ternary operator.

```
identifier = input("Enter an identifier: ")
result = "Valid identifier" if (identifier.isidentifier()) else "Invalid
identifier"
print(result)
```

- 8) Write a program to find the absolute value of a given number using the ternary operator.

```
num = int(input("Enter a number: "))
abs_val = num if num >= 0 else -num
print("The absolute value of", num, "is", abs_val)
```

- 9) Write a program to find the sum of two numbers using the ternary operator.

```
a = int(input("Enter first number: "))  
b = int(input("Enter second number: "))  
sum = a + b  
print("The sum of", a, "and", b, "is", sum)
```

- 10) Write a program to find the difference of two numbers using the ternary operator.

```
a = int(input("Enter first number: "))  
b = int(input("Enter second number: "))  
  
diff = (a - b) if a > b else (b - a)  
  
print("The difference between the two numbers is:", diff)
```