Python Practice: Control Statements

Objective:

To understand and apply Python control statements — if, elif, else, for, while, break, continue, and pass — through coding exercises.

Instructions for Students:

1. Complete all the coding exercises given below in a single Python file named control_statements_practice_name.py
2. Ensure that your code is properly commented to explain what each part does.
3. Once you complete the exercises: test your program for different inputs and save your .py file.
4. Upload your file to your GitHub account
5. Share your GitHub repository link in assignment

Python Exercises

1. Check if a number is positive, negative, or zero

```
num = float(input("Enter a number: "))

if num > 0:
   print("The number is positive.")
elif num < 0:
   print("The number is negative.")
else:
   print("The number is zero.")
```

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2. Find the largest of three numbers

```
a = int(input("Enter first number: "))
b = int(input("Enter second number: "))
c = int(input("Enter third number: "))

if a >= b and a >= c:
   print("Largest number is:", a)
elif b >= a and b >= c:
   print("Largest number is:", b)
else:
   print("Largest number is:", c)
```

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3. Print all even numbers from 1 to 20 using a for loop

```
for i in range(1, 21):
    if i % 2 == 0:
        print(i)
```

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4. Calculate factorial using while loop

```
n = int(input("Enter a number: "))
fact = 1
i = 1

while i <= n:
    fact *= i
    i += 1

print("Factorial of", n, "is", fact)
```

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5. Demonstrate break and continue

```
for num in range(1, 11):
    if num == 5:
        continue  # skip 5
    if num == 9:
        break     # stop at 9
    print(num)
```

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6. Use pass statement

```
for i in range(1, 6):
    if i == 3:
        pass  # placeholder for future code
    else:
        print("Current number:", i)
```

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7. Nested if example

```
num = int(input("Enter a number: "))

if num > 0:
    if num % 2 == 0:
        print("Positive Even Number")
    else:
        print("Positive Odd Number")
```

```
else:
    print("Negative Number")
```

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8. Print a simple triangle pattern

```
for i in range(1, 6):
    for j in range(1, i + 1):
        print("*", end=" ")
    print()
```

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9. Print numbers divisible by both 3 and 5 between 1 and 50

```
for i in range(1, 51):
    if i % 3 == 0 and i % 5 == 0:
        print(i)
```

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10. Find sum of digits of a number

```
num = int(input("Enter a number: "))
total = 0

while num > 0:
    digit = num % 10
    total += digit
    num //= 10

print("Sum of digits:", total)
```

Submission Checklist

- All 10 programs are working and well commented.
- Code is saved as control_statements_practice.py.
- File uploaded to GitHub repository under the folder Control_Statements_Assignment.
- GitHub link shared with the instructor before the deadline.