```python
# 1. Identify if a Number is Positive or Negative
def check_number(num):
    if num > 0:
        return "Positive"
    elif num < 0:
        return "Negative"
    else:
        return "Zero"

print(check_number(5))
print(check_number(-3))
```

```
Positive
Negative
```

```python
# 2. Identify if a Number is Even or Odd
def check_even_odd(num):
    return "Even" if num % 2 == 0 else "Odd"

print(check_even_odd(10))
print(check_even_odd(7))
```

```
Even
Odd
```

```python
# 3. Calculate the Power of a Number
def power(base, exponent):
    return base ** exponent

print(power(5, 2))
```

```
25
```

```python
# 4. Compare Two Numbers
def compare_numbers(a, b):
    if a > b:
        return f"{a} is greater than {b}"
    elif a < b:
        return f"{b} is greater than {a}"
    else:
        return "Both numbers are equal"

print(compare_numbers(10, 20))
print(compare_numbers(15, 15))
```

```
20 is greater than 10
Both numbers are equal
```

```python
# 5. Determine if a Year is a Leap Year
def is_leap_year(year):
    if (year % 4 == 0 and year % 100 != 0) or (year % 400 == 0):
```

```
        return f"{year} is a leap year"
    else:
        return f"{year} is not a leap year"

print(is_leap_year(2024))
print(is_leap_year(1900))
```

```
2024 is a leap year
1900 is not a leap year
```

```
# 6. Grade Calculator
def grade_calculator(score):
    if 90 <= score <= 100:
        return "A"
    elif 80 <= score <= 89:
        return "B"
    elif 70 <= score <= 79:
        return "C"
    elif 60 <= score <= 69:
        return "D"
    else:
        return "F"

print(grade_calculator(85))
print(grade_calculator(50))
```

```
B
F
```

```
# 7. How Old Are You? (Age-Based Messages)
def age_message(age):
    if age < 16:
        return "You can't drive."
    elif 16 <= age <= 17:
        return "You can drive but not vote."
    elif 18 <= age <= 24:
        return "You can vote but not rent a car."
    else:
        return "You can do pretty much anything."

print(age_message(15))
print(age_message(21))
```

```
You can't drive.
You can vote but not rent a car.
```

```
# 8. FizzBuzz Challenge
for i in range(1, 21):
    if i % 3 == 0 and i % 5 == 0:
        print("FizzBuzz")
    elif i % 3 == 0:
```

```
        print("Fizz")
    elif i % 5 == 0:
        print("Buzz")
    else:
        print(i)
```

```
1
2
Fizz
4
Buzz
Fizz
7
8
Fizz
Buzz
11
Fizz
13
14
FizzBuzz
16
17
Fizz
19
Buzz
```

```
# 9. Leap Year Checker
year = int(input("Enter a year: "))
if (year % 4 == 0 and year % 100 != 0) or (year % 400 == 0):
    print(f"{year} is a leap year")
else:
    print(f"{year} is not a leap year")
```

```
Enter a year:  2025
```

```
2025 is not a leap year
```