```python
# Demonstrates conditionals

x = int(input("What's x? "))
y = int(input("What's y? "))

if x < y:
    print("x is less than y")
if x > y:
    print("x is greater than y")
if x == y:
    print("x is equal to y")
```

```python
# Demonstrates mutually exclusive conditions

x = int(input("What's x? "))
y = int(input("What's y? "))

if x < y:
    print("x is less than y")
elif x > y:
    print("x is greater than y")
elif x == y:
    print("x is equal to y")
```

```python
# Demonstrates fewer conditions

x = int(input("What's x? "))
y = int(input("What's y? "))

if x < y:
    print("x is less than y")
elif x > y:
    print("x is greater than y")
else:
    print("x is equal to y")
```

```python
# Demonstrates inequalities and logical operator

x = int(input("What's x? "))
y = int(input("What's y? "))

if x < y or x > y:
    print("x is not equal to y")
else:
    print("x is equal to y")
```

```python
# Demonstrates equality

x = int(input("What's x? "))
y = int(input("What's y? "))

if x == y:
    print("x is equal to y")
else:
    print("x is not equal to y")
```

```python
# Demonstrates inequality

x = int(input("What's x? "))
y = int(input("What's y? "))

if x != y:
    print("x is not equal to y")
else:
    print("x is equal to y")
```

```python
# Demonstrates inequalities and logical operators

score = int(input("Score: "))

if score >= 90 and score <= 100:
    print("Grade: A")
elif score >= 80 and score < 90:
    print("Grade: B")
elif score >= 70 and score < 80:
    print("Grade: C")
elif score >= 60 and score < 70:
    print("Grade: D")
else:
    print("Grade: F")
```

```python
# Demonstrates inequalities and logical operators

score = int(input("Score: "))

if 90 <= score and score <= 100:
    print("Grade: A")
elif 80 <= score and score < 90:
    print("Grade: B")
elif 70 <= score and score < 80:
    print("Grade: C")
elif 60 <= score and score < 70:
    print("Grade: D")
else:
    print("Grade: F")
```

```python
# Demonstrates chained comparisons

score = int(input("Score: "))

if 90 <= score <= 100:
    print("Grade: A")
elif 80 <= score < 90:
    print("Grade: B")
elif 70 <= score < 80:
    print("Grade: C")
elif 60 <= score < 70:
    print("Grade: D")
else:
    print("Grade: F")
```

```python
# Demonstrates fewer comparisons

score = int(input("Score: "))

if score >= 90:
    print("Grade: A")
elif score >= 80:
    print("Grade: B")
elif score >= 70:
    print("Grade: C")
elif score >= 60:
    print("Grade: D")
else:
    print("Grade: F")
```

```python
# Demonstrates modulo operator

x = int(input("What's x? "))

if x % 2 == 0:
    print("Even")
else:
    print("Odd")
```

```python
# Demonstrates a function that returns a bool


def main():
    x = int(input("What's x? "))
    if is_even(x):
        print("Even")
    else:
        print("Odd")


def is_even(n):
    if n % 2 == 0:
        return True
    else:
        return False


main()
```

```python
# Demonstrates conditional expressions (ternary operators)


def main():
    x = int(input("What's x? "))
    if is_even(x):
        print("Even")
    else:
        print("Odd")


def is_even(n):
    return True if n % 2 == 0 else False


main()
```

```python
# Demonstrates returning the value of a Boolean expression


def main():
    x = int(input("What's x? "))
    if is_even(x):
        print("Even")
    else:
        print("Odd")


def is_even(n):
    return n % 2 == 0


main()
```