```
# Demonstrates conditionals
 1
 2
    x = int(input("What's x?"))
 3
    y = int(input("What's y? "))
 6
    if x < y:
        print("x is less than y")
 7
    if x > y:
        print("x is greater than y")
 9
    if x == y:
10
11
        print("x is equal to y")
```

```
# Demonstrates mutually exclusive conditions
 1
2
    x = int(input("What's x?"))
3
    y = int(input("What's y? "))
 6
    if x < y:
        print("x is less than y")
7
    elif x > y:
 8
        print("x is greater than y")
9
    elif x == y:
10
11
        print("x is equal to y")
```

```
# Demonstrates fewer conditions
2
    x = int(input("What's x?"))
3
    y = int(input("What's y? "))
 6
    if x < y:
        print("x is less than y")
7
    elif x > y:
        print("x is greater than y")
9
10
    else:
11
        print("x is equal to y")
```

```
# 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")
```

```
# 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")
```

```
# 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")
```

```
1
     # Demonstrates inequalities and logical operators
 2
    score = int(input("Score: "))
 3
 4
 5
    if score >= 90 and score <= 100:</pre>
         print("Grade: A")
 6
    elif score >= 80 and score < 90:</pre>
 7
         print("Grade: B")
 8
    elif score >= 70 and score < 80:</pre>
 9
         print("Grade: C")
10
11
    elif score >= 60 and score < 70:</pre>
12
         print("Grade: D")
13
    else:
         print("Grade: F")
14
```

```
# Demonstrates inequalities and logical operators
 1
 2
    score = int(input("Score: "))
 3
 4
    if 90 <= score and score <= 100:</pre>
         print("Grade: A")
 6
    elif 80 <= score and score < 90:</pre>
         print("Grade: B")
 8
    elif 70 <= score and score < 80:</pre>
 9
         print("Grade: C")
10
11
    elif 60 <= score and score < 70:</pre>
12
         print("Grade: D")
13
    else:
         print("Grade: F")
14
```

```
1
    # Demonstrates chained comparisons
 2
    score = int(input("Score: "))
 3
 4
    if 90 <= score <= 100:
        print("Grade: A")
 6
    elif 80 <= score < 90:
        print("Grade: B")
 8
    elif 70 <= score < 80:
 9
        print("Grade: C")
10
11
    elif 60 <= score < 70:
12
        print("Grade: D")
13
    else:
14
        print("Grade: F")
```

```
1
    # Demonstrates fewer comparisons
 2
    score = int(input("Score: "))
 3
 4
    if score >= 90:
        print("Grade: A")
 6
    elif score >= 80:
        print("Grade: B")
 8
    elif score >= 70:
 9
        print("Grade: C")
10
11
    elif score >= 60:
        print("Grade: D")
12
13
    else:
14
        print("Grade: F")
```

```
# Demonstrates modulo operator

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

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

else:
    print("Odd")
```

```
# Demonstrates a function that returns a bool
 2
 3
 4
    def main():
 5
        x = int(input("What's x? "))
        if is_even(x):
 6
            print("Even")
 7
        else:
 8
            print("Odd")
 9
10
11
    def is_even(n):
12
        if n % 2 == 0:
13
14
            return True
15
        else:
            return False
16
17
18
19
    main()
```

```
# Demonstrates conditional expressions (ternary operators)
 2
 3
 4
    def main():
 5
         x = int(input("What's x? "))
         if is_even(x):
 6
             print("Even")
 7
         else:
 8
             print("Odd")
 9
10
11
    def is_even(n):
    return True if n % 2 == 0 else False
12
13
14
15
16
    main()
```

```
# Demonstrates returning the value of a Boolean expression
 1
 2
 3
 4
    def main():
 5
         x = int(input("What's x? "))
         if is_even(x):
 6
             print("Even")
 7
 8
         else:
             print("Odd")
 9
10
11
    def is_even(n):
    return n % 2 == 0
12
13
14
15
16
    main()
```