```python
# Example 1: Checking if a number is positive or negative
x = -3
if x >= 0:
    print("Positive number")
else:
    print("Negative number")


# Example 2: Even or Odd number check
num = 7
if num % 2 == 0:
    print("Even number")
else:
    print("Odd number")


# Example 3: Check if someone is eligible to vote
age = 17
if age >= 18:
    print("Eligible to vote")
else:
    print("Not eligible to vote")


######### elseif ladder ##########
# Example 1: Checking grades
score = 85
if score >= 90:
    print("A")
elif score >= 80:
    print("B")
else:
```

```python
    print("C")


# Example 2: Classifying temperature
temp = 30
if temp > 40:
    print("It's hot")
elif 20 <= temp <= 40:
    print("It's warm")
else:
    print("It's cold")


# Example 3: Comparing three numbers
a, b, c = 5, 10, 7
if a > b and a > c:
    print("a is the largest")
elif b > c:
    print("b is the largest")
else:
    print("c is the largest")
"""
syntax :
if <condition>:
    statements
elif <condition>:
    statements
elif <condition>:
    statements
else:
    statements
```

```python
"""
"""
marks = int(input("enter marks : "))


if marks<=100 and marks>=85:
    print("A grade")
elif marks<85 and marks>=70:
    print("B grade")
elif marks<70 and marks>=65:
    print("C grade")
elif marks<65 and marks>=35:
    print("D grade")
else:
    print("Fail")
 """
######### Looping statements ##########
# 1.while 2.for


"""
while <condition>:
    statements


"""


# Example 1: Count down
count = 5
while count > 0:
    print(count)
```

```python
        count -= 1


# Example 2: Sum of numbers from 1 to 10
total = 0
num = 1
while num <= 10:
    total += num
    num += 1
print("Sum:", total)


# Example 3: User input loop
password = ""
while password != "secret":
    password = input("Enter the password: ")
print("Access granted!")
""" x = int(input("enter: "))
while x<10:
   x = x+1
   print(x) # 5 6 7 8 9 10
 """


"""
syntax:
for <variable> in <sequence>:
    statements


"""
a = 10
for x in range(0,a):
```

```python
    print(x) # 0 1 2 3 4



# Example 1: Iterate over a list
fruits = ["apple", "banana", "cherry"]
for fruit in fruits:
    print(fruit)


# Example 2: Iterate through a range
for i in range(5):
    print(i)


# Example 3: Iterating through a dictionary
person = {"name": "Alice", "age": 25, "city": "New York"}
for key, value in person.items():
    print(key, ":", value)


# 0------------5
```