

08_control_flow_statements

October 11, 2024

1 Control Flow Statements

2 If, elif, else

```
[7]: age = 6
     if age >= 18:
         print("You are eligible to vote.")
     elif age <= 5:
         print("You are still a toddler.")
     elif age >=6 and age <= 10:
         print("You should enrol in a school with Form-B.")
     else:
         print("Abhi chotay ho ap.")
```

You should enrol in a school with Form-B.

3 Examples

```
[11]: temp = 32

     if temp >= 30:
         print("It's a hot day. Thanda pani pee lo")
     elif temp <= 10:
         print("It's a cold day. Garam chai pee lo.")
     else:
         print("It's neither hot nor cold. Enjoy the weather.")
```

It's a hot day. Thanda pani pee lo

```
[14]: occassion = "Eid"

     if occassion == "Eid-ul_Fitr":
         print("Let's prepare some Sheer Khurma.")
     elif occassion == "Eid-ul_Adha":
         print("Let's prepare some Kebab.")
     else:
         print("It's a normal day. let's have Aalo Gobhi.")
```

It's a normal day. let's have Aalo Gobhi.

3.1 Nested If statements

```
[16]: age = 18
      license = True

      if age >= 18:
          if license:
              print("You are eligible to drive.")
          else:
              print("You are not eligible to drive, you need a license.")
      else:
          print("You are not eligible to drive.")
```

You are eligible to drive.

4 Loops

4.1 1. for loop

```
[18]: print("Aammar")
      print("Bilal")
      print("Qasim")
      print("Shahid")
      print("Tariq")
      print("Umer")
```

Aammar
Bilal
Qasim
Shahid
Tariq
Umer

```
[23]: list = ["Aammar", "Bilal", "Qasim", "Shahid", "Tariq", "Umer"]

      for item in list:
          print(item)
```

Aammar
Bilal
Qasim
Shahid
Tariq
Umer

4.2 While loop

```
[37]: cups_of_chai = 0

while cups_of_chai < 2:
    print("I want more chai.")
    cups_of_chai += 1

print("I have had enough chai.")
```

```
I want more chai.
I want more chai.
I have had enough chai.
```

4.3 Break and Continue

```
[42]: cups_of_chai = 0

while cups_of_chai < 200000:
    cups_of_chai += 1
    print("I want more chai.")
    if cups_of_chai == 3:
        print("Too much chai, stopping now.")
        break
    print("I have had", cups_of_chai, "cups of chai.")
```

```
I want more chai.
I have had 1 cups of chai.
I want more chai.
I have had 2 cups of chai.
I want more chai.
Too much chai, stopping now.
```

4.4 continue

```
[44]: cups_of_chai = 0

while cups_of_chai < 5:
    cups_of_chai += 1
    print("I want more chai.")
    if cups_of_chai == 3:
        print("Too much chai, stopping now.")
        continue
    print("I have had", cups_of_chai, "cups of chai.")
```

```
I want more chai.
I have had 1 cups of chai.
I want more chai.
I have had 2 cups of chai.
```

```
I want more chai.  
Too much chai, stopping now.  
I want more chai.  
I have had 4 cups of chai.  
I want more chai.  
I have had 5 cups of chai.
```

4.5 Range function in loops

```
[47]: for cup in range(1, 10, 2):  
       print("Chai is ready, Chai cup", cup, "Served.")
```

```
Chai is ready, Chai cup 1 Served.  
Chai is ready, Chai cup 3 Served.  
Chai is ready, Chai cup 5 Served.  
Chai is ready, Chai cup 7 Served.  
Chai is ready, Chai cup 9 Served.
```

5 Infinite loops

```
[ ]: while True:  
      print("This loop will run forever.")  
      break # you need to be careful while running this loop.
```

```
[58]: count = 0  
  
while True:  
    count += 1  
    print("This loop will run forever.")  
    if count == 2:  
        break
```

```
This loop will run forever.  
This loop will run forever.
```

5.1 Pass statement

```
[64]: cups_of_chai = 0  
  
while cups_of_chai < 5:  
    cups_of_chai += 1  
    print("I want more chai.")  
    if cups_of_chai == 3:  
        print("Too much chai, stopping now.")  
        pass  
    print("I have had", cups_of_chai, "cups of chai.")
```

I want more chai.
I have had 1 cups of chai.
I want more chai.
I have had 2 cups of chai.
I want more chai.
Too much chai, stopping now.
I have had 3 cups of chai.
I want more chai.
I have had 4 cups of chai.
I want more chai.
I have had 5 cups of chai.

5.2 try, except and finally

```
[66]: print("Hello")  
      print(1/0)
```

Hello

```
-----  
ZeroDivisionError                                Traceback (most recent call last)  
Cell In[66], line 2  
      1 print("Hello")  
----> 2 print(1/0)  
  
ZeroDivisionError: division by zero
```

```
[70]: # example of try, except and finally  
try:  
    print("Hello")  
    print(5/5)  
except ZeroDivisionError:  
    print("There is an error, you are trying to divide by zero which is  
↳impossible.")  
finally:  
    print("This will execute no matter what.")
```

Hello

1.0

This will execute no matter what.