# Python Flow Control

if
if else
if elif else

# Everyday Decisions

- If the user maintained a bank account balance over $1000 waive the transaction fees.
- If a user cancels their appointment less than 24 hours before the appointment time, charge a cancellation fee.
- If cat has not been vaccinated, call the owner to set an appointment.
- If order total under $50, add $10 shipping charge.
- If course is completed, send certificate to student.

# Use Comparison Operators for Control Flow

| Operator | Meaning |
|---|---|
| == | Equal to |
| != | No equal to |
| < | Less than |
| > | Greater than |
| <= | Less than or equal to |
| >= | Greater than or equal to |
| **>, <, >=, <= work only with integer or floating numbers** | |

# Boolean Values

- Only has two values: **True** and **False**
- Type case exactly as above: Capital T and Capital F.

# Flow Control Statements: if

SYNTAX:

```
if condition:
    indented block of code will be executed
```

#if the condition is true, the if block of code is executed.

#if the condition is false, program execution will not execute the if clause, program execution will continue after.

# Flow Control Statements: if

```
if city == “Hagatna”:
        print(“The capital of Guam”)
        ……
        ……
```

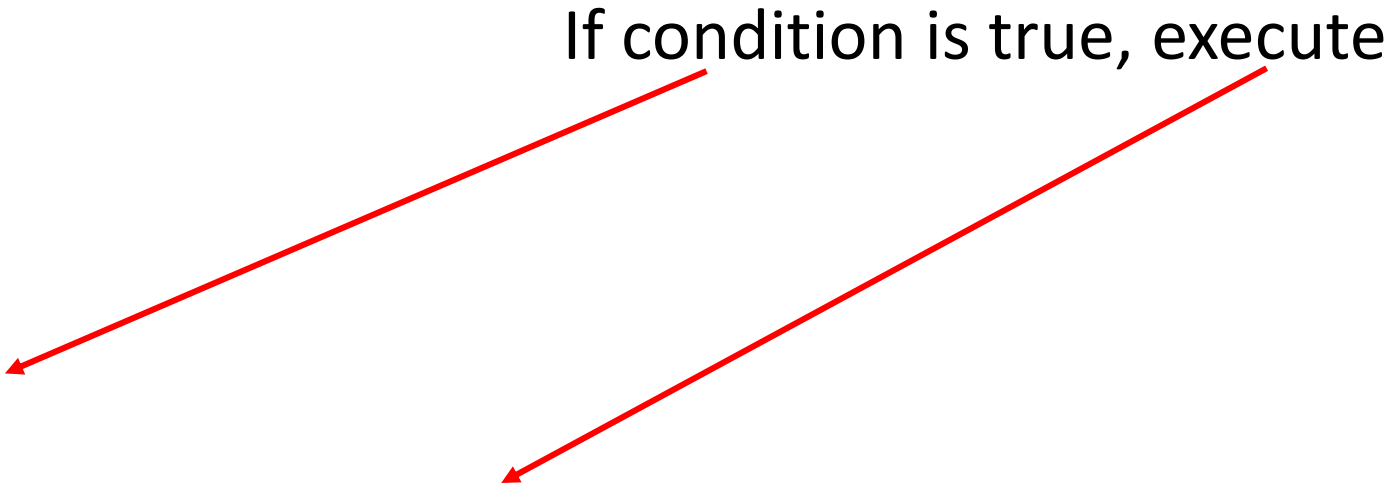
#if the condition is true, the if block of code is executed.

#if the condition is false, program execution will not execute the if clause, program execution will continue after.

# Flow Control Statements: if

- IF Statement
  - **“If condition is true”**, execute the code in the if clause.
  - The IF Statement consists of the following:
    - The if keyword
    - A condition (that evaluates to True or False)
    - A colon
    - Starting on the next line, the if clause (indented block of code) will be executed if the condition is True.
    - Place as many lines of code needed, make sure it is indented.
    - Indenting also used for readability.

# Examples: if




```
if day == “Wednesday”:
        print(“Wear your teal GCC polo shirt”)
```

# Examples: if

```
if maxCredits > 15:
        print("See GCC Advisor for Advisement and Approval")
        print("Also requires Department Chairperson's signature")
```

# Examples: if

```
if luggageWt > 50:
        print("Overweight luggage fee is $100")
```

# Flow Control Statements: if, else

SYNTAX:

```
if condition:
    indented block of code
else:
    indented block of code
```

If condition is true, **execute if** block of code

If condition is false, **execute else** block of code

# Flow Control Statements: if, else

```
If city == “Hagatna”:
        print(“The capital of Guam”)
else:
        print(“Not a state”)
```

# Examples: if, else

```
if maxCredits > 15:
        print("See GCC Advisor for Advisement and Approval")
else:
        print("Have a Great Semester")
```

# Examples: if, else

```
if luggageWt > 50:
        print("Overweight luggage fee is $100")
else:
        print("Thank you for flying United")
```

# Flow Control Statements: if, elif, else

```
if condition:
        indented block of code
elif condition:
        indented block of code
(if needed, more elif)
else:
        indented block of code
```

# Examples: if, elif, else

```
if day == “Wednesday”:
        print(“Wear your teal GCC polo shirt”)
elif day == “Thursday”:
        print(“Wear other GCC colored polo or t-shirt”)
else:
        print(“Wear appropriate attire”)
```

```
country = input("Where are you from? ").upper()

if country == "CANADA" :
        print("Hello")
elif country == "GERMANY" :
        print("Guten Tag")
elif country == "FRANCE" :
        print("Bonjour")
else:
        print("Please refer to Google for the correct greeting")
```

```
windSpeed = int(input("Enter wind speed"))

if windSpeed > = 157:
        print("Typhoon Category 5")
elif windSpeed > = 130:
        print("Typhoon Category 4")
elif windSpeed > = 111:
        print("Typhoon Category 3")
elif windSpeed > = 96:
        print("Typhoon Category 2")
elif windSpeed > = 74:
        print("Typhoon Category 1")
else:
        print("Stay tuned to your Weather channel or app")
```

# Exercise: Write a Program

Use the input statement to prompt the user to enter a Exam 1 grade. (Use a descriptive prompt).

Using the table below, print the appropriate Letter Grade.

| Range | Letter Grade |
|---|---|
| 90-100 | A |
| 89-80 | B |
| 79-70 | C |
| 69-60 | D |
| Below 60 | F |