Hello World Program:

```
#!/usr/bin/env python3

# This program prints Hello, world!

print('Hello, world!')
```

ADD two numbers Program:

```
#!/usr/bin/env python3

# Store input numbers

num1 = input('Enter first number: ')

num2 = input('Enter second number: ')

# Add two numbers

sum = float(num1) + float(num2)

# Display the sum

print('The sum of {0} and {1} is {2}'.format(num1, num2, sum))
```

Average calc Program:

```
#!/usr/bin/env python3

# Get three test score

round1 = int(raw_input("Enter score for round 1: "))

round2 = int(raw_input("Enter score for round 2: "))

round3 = int(raw_input("Enter score for round 3: "))

# Calculate the average
```

```
average = (round1 + round2 + round3) / 3

# Print out the test score

print "the average score is: ", average
```

Simple calculator Program:

```
#!/usr/bin/env python3

# Program make a simple calculator

# This function adds two numbers

def add(x, y):

   return x + y

# This function subtracts two numbers

def subtract(x, y):

   return x - y

# This function multiplies two numbers

def multiply(x, y):

   return x * y

# This function divides two numbers

def divide(x, y):

   return x / y

print("Select operation.")

print("1.Add")

print("2.Subtract")

print("3.Multiply")
```

```
print("4.Divide")
# Take input from the user
choice = input("Enter choice(1/2/3/4): ")
num1 = float(input("Enter first number: "))
num2 = float(input("Enter second number: "))
if choice == '1':
   print(num1,"+",num2,"=", add(num1,num2))
elif choice == '2':
   print(num1,"-",num2,"=", subtract(num1,num2))
elif choice == '3':
   print(num1,"*",num2,"=", multiply(num1,num2))
elif choice == '4':
   print(num1,"/",num2,"=", divide(num1,num2))
else:
   print("Invalid input")
```

Date Usage:

```
import datetime
now = datetime.datetime.now()
print "-" * 25
print now
```

```
print now.year

print now.month

print now.day

print now.hour

print now.minute

print now.second


print "-" * 25

print "1 week ago was it: ", now - datetime.timedelta(weeks=1)

print "100 days ago was: ", now - datetime.timedelta(days=100)

print "1 week from now is it: ",  now + datetime.timedelta(weeks=1)

print "In 1000 days from now is it: ", now + datetime.timedelta(days=1000)


print "-" * 25

birthday = datetime.datetime(2012,11,04)


print "Birthday in ... ", birthday - now

print "-" * 25
```

Filename search Usage:

```
import fnmatch
import os
images = ['*.jpg', '*.jpeg', '*.png', '*.tif', '*.tiff']
matches = []
for root, dirnames, filenames in os.walk("C:\"):
    for extensions in images:
        for filename in fnmatch.filter(filenames, extensions):
            matches.append(os.path.join(root, filename))
```

search pattern in string :

```
# Python program to illustrate
# optional matching
# with question mark(?)
import re
batRegex = re.compile(r'Bat(wo)?man')
mo1 = batRegex.search('The Adventures of Batman')
print(mo1.group())
```

Extract data from url :

```
import requests,json

from pprint import pprint

#Step 1 start by importing the code

#step 2 send a get request, get a response object

result=requests.get('https://developer.nrel.gov/api/alt-fuel-stations/v1.json?fuel_type=E85,ELEC&state=CA&limit=2&api_key=A2xCrJszBZCfOh8IajbffV9wb14GQTjiALPWwv2R&format=JSON')

# pretty printing data

pretty_data = json.dumps(result.json(), indent=4)

pprint(result.json())

#print(pretty_data)

#step 3: Get the status code..returns an integer on success

print(result.status_code)

#step 4:get the data

result.text

#step 5: get data in a more readable json format

result.json()
```

Run commands using python :

```
import subprocess,os

list_files = subprocess.run(["ls", "-l"])
```

```
list_files = home_dir = os.system("ls -l")
```

Ref :

https://wiki.python.org/moin/SimplePrograms

https://github.com/geekcomputers/Python

https://developer.nrel.gov/signup/

Online editor :

https://repl.it/languages/python3