

week [2] objectives:-

learn about functions, DataStructure [lists - dictionary - Tuple - sets]
 error handling, files input/output, random numbers

video (21)

collection lists [] ordered, changeable, duplicates
 sets { } unordered, add/remove, no duplicates
 Tuple () ordered, unchangeable, duplicates, faster

notes

methods

to know
 move methods
 use
 dir()

• append()	add at end	• sort()	• pop()
• remove()	remove	• reverse()	for set
• insert(,)	add at index	• clear()	remove first element
		• count()	

video (22) python shopping cart program solved ✓video (23)

2D collection listname[][]
 row column

to present use 2
 nested for loop

num pad exercise

```
for collection1 in collection2D:
    for collection2 in collection1:
        print(collection2, end=" ")
    print()
```

video (24) Quiz game with python solved ✓

video (25)

Dictionaries

collection of {Key: value} pairs
ordered, changable, no duplicates

methods

- `get("Key")` return value if Key found
or None if not
- ~~update~~
- `update({Key: value})` replace
- `pop("Key")` remove
- `popitem()` remove latest item
- `keys()` get the Keys in a list
- `values()` " the values "
- `items()` get the pairs in 2D list

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python conversion stand program solved ✓

video (27)

Random numbers

```
import random
random.randint(start, end)
    pick from range
random.choice(listname)
random.shuffle(listname)
```

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Rock PAPER SCISSOR game solved ✓

video (29)

DICE ROLLER program

video (30)

encryption program

```
chars = string.punctuation + string.digits + string.ascii_letters + " "
```


video (31)

Functions

a block of reusable code

```
def function_name (parameter):
    return
```

call function_name (variables or values)

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default arguments

parameters can have default value

```
def function(x=5, y=3)
```

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Keyword arguments

order of arguments doesn't matter
at calling it

```
functioncall ("Hello", title="Hi", last="Taker", first="Mort")
```

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ARBITRARY arguments

^{could change}
^{tuple} *args multiple non-key arguments
 def function(*args)

^{dict} **Kwargs multiple keyword-arguments

video (35)

modules

```
import builtin-modules as shortname
from math import pi
```

you can add your own module
with import filename

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variable scope variable is visible and accessible

scope resolution

"LEGB"

local → enclosed → Global → Built in

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exception handling

try: _____

except Exception:

else :

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File detection

import as

as path exists (path)

path = ' - // - // - // - .txt '

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reading a file

with `open(path)` as `file`:

```
print(file.read())
```

closed automatically after

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write a file

with open('path', 'w') as file:

file.write(text)

w for overwrite

a for append

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copy a file

import shutil

shutil.copyfile('source', 'destine')

video (42)

move a file

import os

os.replace('source', 'destina')

video (43)

remove a file

import os import shutil

os.remove(path) don't delete empty folders

os.rmdir(path) don't delete folder with contain

*shutil.rmtree() delete a folder with contains