## funtion

| | |
|---|---|
| print | Show information on the screen |
| int | to tell that what you write is a number |
| float | change number to be decimal number |
| str | list of number, letter and symbol |

## Addition

| | |
|---|---|
| str+str | the result combine together |
| str+ int or float | crash |
| int/float + int/float | math - addition |

## Multiplication and Exponents

| | |
|---|---|
| string*string | crash |
| string*number | combine string together |
| number*number | math-multiply |
| number ** number | math-exponent |
| string ** string | crash |
| string**number | crash |

## Reverse Word

```
while True:
word = input("Please enter a word")
index = 0
reverse = ' '
while int(index) < len(word):
reverse = word[index] + (reverse)
index = int(index) + 1
print ("Reverse: ", reverse)
```

## Convert to binary

```
numb = int(input('enter the number to convert to binary'))
bistring = ''
while numb>0 :
rem = numb%2
bistring = str(rem)+bistring
numb = numb//2
print ('Binary Number : ', bistring)
```

## Naming Convention

Rule for giving name
- letter
- numbers
- underscore _
Valid name
- _myStr
- my3
- Hello_there
Invalid name
- 3my="hi" -- cannot start with number
- first name="hi"
- first-name
- first+name

## Area of Circle

```
"""
Python Intro Assignment #2
name
student number
"""
#Ask the user for a radius of a circle
user_radius = input("What is a radius of a circle?")
#Convert the given radius to a floating point
radius = float(user_radius)
#Make a variable called pi
pi = float(3.1415)
#Calculate the area of the circle using exponents
area = pi(radius*2)
#Display the area of the circle to the user
print ("The area of the circle is", area)
```

## example

Print (2) – integer
Print (2.5) – floating point
Print ("Hello") – string
Print (mystr) – variable

## example (cont)

Print (mystr,"Hi",2,1.0) -- commas
mystr = "Hi"
mystr ← name
"Hi" ← value can change
print (int(1.5)) → 1
print (int("2")) → 2
print (float(1)) → 1.0 anything to a float
Modulo/Remainder %
print (4%2) → 0
print (30%7) → 2

## fuction

```
def myprint(text) :
    print ('xxx'+str(text)+'xxx')
myprint (1)
```

xxx 1 xxx

## Function (return number) Ex

```
def doubleIt (number):
    return number *2
print (doubleIt(2))
print (doubleIt('hello'))
myvar = doubleIt(doubleIt(3))
print (myvar)
```

4
hellohello
12

## symbol

| == | equal |
|---|---|
| != | not equal |
| > | greater than |
| < | less than |
| >= | greater than or equal to |
| <= | less than or equal to |

## Vocabulary

| variable | hold a value and can be change |
|---|---|
| string | a list of character such as number, letter and symbols |
| integer | a number without decimal |
| float | number in dicimal |
| syntax | structure of language |
| value | returns a list of all the values available in a given dictionary. |
| while | it's a loop that will go over and over until you stop it |
| loop | traditionally used when you have a piece of code which you want to repeat n number of times |
| input | Run the program. In the Shell you should see |
| print | to show information on the |
| modulo | leave remainder |
| # | Comment, no effect |
| randon.choice | program that someone wrote |
| import random | to get get a random program from someone |
| import | to import program from someone |
| import random + random.choice() | pick random item in the list |
| palindrome | is derived from the Greek palíndromos, meaning running back again |

## Guess word game

```
import random
#Create a list
guesslist = ['grape', 'orange', 'chloroplast', 'ribosome', 'lipstick']
chance = 3
score = 0
```

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## Guess word game (cont)

```
print (guesslist)
while chance != 0:
random_item = random.choice(guesslist)
user_input = input("Please guess a word: ")
if user_input == random_item:
print ("That's correct!")
score = score + 100
print ("Score:", score)
else:
if user_input not in guesslist:
print ("Sorry, that isn't even in the list!")
chance = chance - 1
print ("Chance Remaining:", chance)
else:
print ("Sorry, wrong choice!")
chance = chance - 1
print ("Chance Remaining:", chance)
if chance == 0:
print ("The word was", random_item)
print ("The score is", score)
```

## Sort word per line

```
mystr = "Hello"
letter_num = 0
while letter_num < len(mystr):
print (mystr[letter_num])
letter_num = letter_num + 1
```

```
H
e
l
l
o
```

## Print Name

```
name = "tim GIRARD"
print (name.upper()) → TIM GIRARD
print (name.lower()) → tim girard
print (name.capitalize()) → Tim girard
print (name.title()) → Tim Girard
```

## fuction

```
def bacon():
    print ('bacon')
    print ('egg')
    print ('text')
    print ('gta')
    print ('guildwar')
    print ('magalodon')
    return
bacon()
bacon()
```

```
bacon
egg
text
gta
guildwar
magalodon
bacon
egg
text
gta
guildwar
magalodon
```

## Example

```
def circlearea(r):
pi = 3.1415
area = pir*2
return area
r = input ('enter the radius of the circle : ')
r = float(r)
print ('the area of the circle is', circlearea(r))
```

```
enter the radius of the circle : 5
the area of the circle is 78.53750000000001
>>>
```

## Example

```
def circlearea(r):
pi = 3.1415
area = pir*2
return area
r = input ('enter the radius of the circle : ')
r = float(r)
print ('the area of the circle is', circlearea(r))
```

```
enter the radius of the circle : 5
the area of the circle is 78.53750000000001
>>>
```

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