Hello World

```
my_word = "Hello, World!"

print(my_word)
```

Python If Else

```
#!/bin/python3


import math

import os

import random

import re

import sys




num = int(input())

n = num % 2


if n == 0 and (2<= num <=5):

   print('Not Weird')

elif n == 0 and (6<= num <=20):

   print('Weird')

elif n == 0 and num > 20:

   print("Not Weird")

elif num % 2 != 0:
```

```
    print('Weird')
```

Arithmetic Operators

```
if __name__ == '__main__':
    a = int(input())
    b = int(input())
i=a+b
j=a-b
k=a*b
print(i,end='\n')
print(j,end='\n')
print(k,end='\n')
```

Python: Division

```
if __name__ == '__main__':
    a = int(input())
    b = int(input())
print(a//b)
print(a/b)
```

LOOPS

```
if __name__ == '__main__':
    n = int(input())
n <=20
for i in range(n):
    {
```

```
    print(i**2)

}
```

List Comprehensions

```
if __name__ == '__main__':

    x = int(input())

    y = int(input())

    z = int(input())

    n = int(input())

print ([[i,j,k] for i in range(0,x+1) for j in range(0,y+1) for k in range(0,z+1) if i + j + k != n ])
```

Find the Runner-Up Score!

```
if __name__ == '__main__':

    n = int(input())

    arr = list(map(int, input().split()))

    x = max(arr)

i=0

while(i<n):

    if x ==max(arr):

        arr.remove(max(arr))

    i+=1

print(max(arr))
```

Nested Lists

```
if __name__ == '__main__':

    l = [[input(), float(input()) ] for _ in range(int(input())) ]

    g = [row[1] for row in l]

    s = set(g)
```

```
    s.remove(min(s))
    name_list = [row[0] for row in l if row[1] == min(s)]
    name_list.sort(reverse=False)
    for i in name_list:
        print(i)
```

Finding the percentage

```
if __name__ == '__main__':
    n = int(input())
    student_marks = {}
    for _ in range(n):
        name, *line = input().split()
        scores = list(map(float, line))
        scores=sum(scores)/3
        student_marks[name] = scores
    query_name = input()
    print('%.2f' % student_marks[query_name])
```

sWAP cASE

```
def swap_case(s):
    return
def swap_case(s):
    a = ""
    for let in s:
        if let.isupper() == True:
            a+=(let.lower())
        else:
            a+=(let.upper())
```

```
    return a
```

String Split and Join

```
def split_and_join(line):

    # write your code here

    x=line.split(" ")

    x='-'.join(x)

    return x
```

What's Your Name

```
def print_full_name(first_name, last_name):

    print("Hello {} {}! You just delved into python.".format(first_name, last_name))
```

Mutations

```
def mutate_string(string, position, character):

    return string[:position] + character + string[position + 1:]
```

Find a string

```
def count_substring(string, sub_string):

    return(sum([1 for i in range(0, len(string) - len(sub_string) + 1) if (string[i:(len(sub_string)+i)] == sub_string)]))
```

String Validators

```
if __name__ == '__main__':

    s = input()

for f in ['isalnum', 'isalpha', 'isdigit', 'islower', 'isupper']:

    print(any(getattr(c, f)() for c in s))
```

Text Alignment

```
#Replace all ______ with rjust, ljust or center.



thickness = int(input()) #This must be an odd number

c = 'H'
```

```
#Top Cone
for i in range(thickness):
    print((c*i).rjust(thickness-1)+c+(c*i).ljust(thickness-1))

#Top Pillars
for i in range(thickness+1):
    print((c*thickness).center(thickness*2)+(c*thickness).center(thickness*6))

#Middle Belt
for i in range((thickness+1)//2):
    print((c*thickness*5).center(thickness*6))

#Bottom Pillars
for i in range(thickness+1):
    print((c*thickness).center(thickness*2)+(c*thickness).center(thickness*6))

#Bottom Cone
for i in range(thickness):
    print(((c*(thickness-i-1)).rjust(thickness)+c+(c*(thickness-i-1)).ljust(thickness)).rjust(thickness*6))
```

Designer Door Mat

```
# Enter your code here. Read input from STDIN. Print output to STDOUT
n, m = map(int,input().split())
pattern = [('.|.'*(2*i + 1)).center(m, '-') for i in range(n//2)]
print('\n'.join(pattern + ['WELCOME'.center(m, '-')] + pattern[::-1]))
```

Text Wrap

```
def wrap(string, max_width):
    return "\n".join([string[i:i+max_width] for i in range(0, len(string), max_width)])
```

itertools.combinations()

```
# Enter your code here. Read input from STDIN. Print output to STDOUT
from itertools import combinations
a,b = map(str, input().split())

for i in range(1,int(b)+1):
    l = list()
    if i > 1:
        print()
    for j in combinations(sorted(a),i):
        l.append("".join(j))
    print(*l, sep="\n",end="")
```