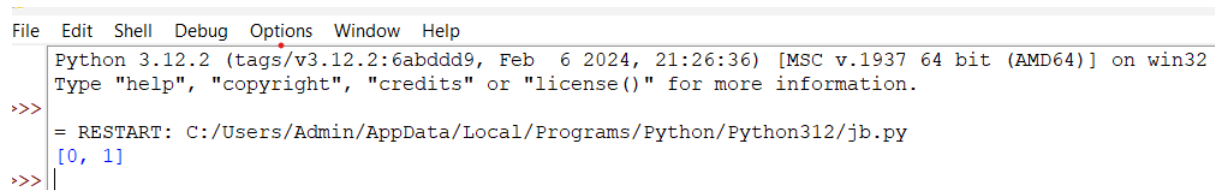


1.Two sum

Program:

```
def two_sum(nums, target):  
    temp= {}  
    for i in range(len(nums)):  
        complement = target - nums[i]  
        if complement in temp:  
            return [temp[complement], i]  
        temp[nums[i]] = i  
    return None  
  
nums = [2, 7, 11, 15]  
  
target = 9  
  
result = two_sum(nums, target)  
  
print(result)
```

output:



```
File Edit Shell Debug Options Window Help  
Python 3.12.2 (tags/v3.12.2:6abddd9, Feb 6 2024, 21:26:36) [MSC v.1937 64 bit (AMD64)] on win32  
Type "help", "copyright", "credits" or "license()" for more information.  
>>> = RESTART: C:/Users/Admin/AppData/Local/Programs/Python/Python312/jb.py  
[0, 1]  
>>> |
```

2.Add two numbers:

Program:

```
def add (a, b):  
    a.reverse()  
    b.reverse()  
    a=int(' '.join(map(str,a)))  
    b=int(' '.join(map(str,b)))  
    c=[]  
    d=a+b
```

```

while d>0:
    r=d%10
    c.append(r)
    d=d//10
return c
a=[1,2,3]
b=[4,5,6]
print(add(a,b))

```

output:

```

Python 3.12.2 (tags/v3.12.2:6abddd9, Feb  6 2024, 21:26:36) [MSC v.1937 64 bit (AMD64)] on win32
Type "help", "copyright", "credits" or "license()" for more information.
= RESTART: C:/Users/Admin/AppData/Local/Programs/Python/Python312/jb.py
[5, 7, 9]

```

3.median of 2 sorted arrays:

Program:

```

def median(nums1, nums2):
    merged = sorted(nums1 + nums2)
    n = len(merged)
    if n % 2 == 0:
        return (merged[n // 2 - 1] + merged[n // 2]) / 2
    else:
        return merged[n // 2]
nums1 = [5,6]
nums2 = [7,8]
print(median(nums1, nums2))

```

output:

```

Python 3.12.2 (tags/v3.12.2:6abddd9, Feb  6 2024, 21:26:36) [MSC v.1937 64 bit
AMD64)] on win32
Type "help", "copyright", "credits" or "license()" for more information.
= RESTART: C:/Users/Admin/AppData/Local/Programs/Python/Python312/jb.py
6.5

```

4.longest substring palindrome:

Program:

def palindrome (s):

```
    maxpalin=""
```

```
    for i in range(len(s)):
```

```
        for j in range(i,len(s)):
```

```
            substr=s[i:j+1]
```

```
            if substr==substr[::-1] and len(substr)>len(maxpalin):
```

```
                maxpalin=substr
```

```
            return maxpalin
```

```
string="babaaadaaa"
```

```
print (palindrome (string))
```

output:

```
Python 3.12.2 (tags/v3.12.2:6abddd9, Feb  6 2024, 21:26:36) [MSC v.1937 64 bit (AMD64)] on win32
Type "help", "copyright", "credits" or "license()" for more information.
>
= RESTART: C:/Users/Admin/AppData/Local/Programs/Python/Python312/jb.py
aaadaaaa
> |
```

5.reverse a number:

Program: def rev(num):

```
    n=0
```

```
    while num>0:
```

```
        r=num%10
```

```
        n=(n*10)+r
```

```
        num=num//10
```

```
    return n
```

```
a=1439
```

```
print(rev(a))
```

output:

```

Python 3.12.2 (tags/v3.12.2:6abddd9, Feb  6 2024, 21:26:36) [MSC v.1937 64 bit (AMD64)] on win32
Type "help", "copyright", "credits" or "license()" for more information.
>>>
= RESTART: C:/Users/Admin/AppData/Local/Programs/Python/Python312/fd.py
9341
>>>

```

6.string to int:

Program:

```

def string(str):
    return int(str)

```

a="422"

print(string(a))

OUTPUT:

```

Python 3.12.2 (tags/v3.12.2:6abddd9, Feb  6 2024, 21:26:36) [MSC v.1937 64 bit (AMD64)] on win32
Type "help", "copyright", "credits" or "license()" for more information.
> |
= RESTART: C:/Users/Admin/AppData/Local/Programs/Python/Python312/jb.py
422
>

```

7.palindrome or not number:

Program:

```

def rev(num):
    reverse=num
    n=0
    while num>0:
        r=num%10
        n=(n*10)+r
        num=num//10
    if reverse==og:
        return True
    else:
        return False

```

a=88

```
print(rev(a))
```

output:

```
Python 3.12.2 (tags/v3.12.2:6abddd9, Feb  6 2024, 21:26:36) [MSC v.1937 64 bit
AMD64] on win32
Type "help", "copyright", "credits" or "license()" for more information.
>
= RESTART: C:/Users/Admin/AppData/Local/Programs/Python/Python312/jb.py
True
>
```

8.largest substring without repeating chars:

PROGRAM:

```
def length_of_longest_substring(s):
```

```
    char_index = {}
```

```
    start = 0
```

```
    max_length = 0
```

```
    for end in range(len(s)):
```

```
        if s[end] in char_index:
```

```
            start = max(start, char_index[s[end]] + 1)
```

```
        char_index[s[end]] = end
```

```
        max_length = max(max_length, end - start + 1)
```

```
    return max_length
```

```
s = "SWWFEW"
```

```
print(length_of_longest_substring(s))
```

output:

```
Python 3.12.2 (tags/v3.12.2:6abddd9, Feb  6 2024, 21:26:36) [MSC v.1937 64 bit
AMD64] on win32
Type "help", "copyright", "credits" or "license()" for more information.
>>
= RESTART: C:/Users/Admin/AppData/Local/Programs/Python/Python312/jb.py
3
>>
```

9.zigzag conversion:

PROGRAM:

```
def convert(s, numRows):
```

```
    if numRows == 1 or numRows >= len(s):
```

```
        return s
```

```
    rows = [""] * numRows
```

```
    index, step = 0, 1
```

```
    for char in s:
```

```
        rows[index] += char
```

```
        if index == 0:
```

```
            step = 1
```

```
        elif index == numRows - 1:
```

```
            step = -1
```

```
        index += step
```

```
    return "".join(rows)
```

```
a="SRIPATHIMARAM"
```

```
b=4
```

```
print(convert(a,b))
```

OUTPUT:

```
Python 3.12.2 (tags/v3.12.2:6abddd9, Feb  6 2024, 21:26:36) [MSC v.1937 64 bit (AMD64)] on win32
Type "help", "copyright", "credits" or "license()" for more information.
>>
= RESTART: C:/Users/Admin/AppData/Local/Programs/Python/Python312/jb.py
SHMRTIAIAMRPA
>>
```

10.REGULAR EXPRESSION MATCHING:

PROGRAM:

```
def is_match(s, p):  
    pattern = re.compile(p)  
    return bool(pattern.fullmatch(s))  
  
s = "ab"  
  
p = ".*"  
  
print(is_match(s, p))
```

OUTPUT:

```
Python 3.12.2 (tags/v3.12.2:6abddd9, Feb  6 2024, 21:26:36) [MSC v.1937 64 bit  
AMD64] on win32  
Type "help", "copyright", "credits" or "license()" for more information.  
>  
= RESTART: C:/Users/Admin/AppData/Local/Programs/Python/Python312/jb.py  
True  
~|
```