

Assignment 1

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- ① Write a Py program to calculate the Average of Numbers in a given list.

Ans:-

```
def calculate_average(number):
```

```
    if len(number) == 0:
```

```
        return None
```

```
    else:
```

```
        return sum(number)/len(number)
```

```
my_list = [1, 2, 3, 4, 5, 6]
```

```
average = calculate_average(my_list)
```

```
print("The average of the list", my_list, "is", average)
```

- ② Write a Program which accepts 6 Integer's values & prints "Duplicates" if any of the value entered are duplicate's otherwise it prints "All unique".

Ans:-

```
values = []
```

```
for i in range(6):
```

```
    value = int(input("Enter next Integer value: "))
```

```
    values.append(value)
```

```
if len(set(values)) < len(values):
```

```
    print("DUPLICATES")
```

```
else:
```

```
    print("ALL UNIQUE")
```

- ⑤ write a program which accepts an integer value as command line and print "OK" if value is betⁿ 1 to 50 (both inclusive) otherwise it prints "Out of range"

Ans:-

```
import sys
```

```
value = int(sys.argv[1]) if len(sys.argv) > 1 else None
```

```
if value is not None and 1 <= value <= 50:
```

```
    print("OK")
```

```
else:
```

```
    print("Out of range")
```

- ④ Write a program which find sum of digits of a number ..

Ans:-

```
n = input("Enter the Number")
```

```
sum = 0
```

```
for digit in n:
```

```
    sum += int(digit)
```

```
print("The sum of digits of", n, "is", sum)
```

- ③ Write a program which prints Fibonacci series of a number

Ans:-

```
n = int(input("Enter a number"))
```

```
fibonacci = [0, 1]
```

```
while fibonacci[-1] < n:
    next_term = fibonacci[-1] + fibonacci[-2]
    fibonacci.append(next_term)
```

```
print("The Fibonacci series up to", n, "is", fibonacci[-1])
```

- ⑥ Write a program which accept an integer value "n" & display all prime numbers till "n".

Ans:-

```
n = int(input("Enter a number:"))
```

```
for i in range(2, n+1):
    is_prime = True
```

```
    for j in range(2, i):
```

```
        if i % j == 0:
```

```
            is_prime = False
```

```
            break
```

```
    if
```

```
        is_prime:
```

```
            print(i)
```

- ⑦ Write a program that accept two integer values and if both are equal then prints "SAME Identity" otherwise prints "Different Identity".

Ans:-


```

a = int(input("Enter first Number:"))
b = int(input("Enter second Number:"))

if a == b:
    print("Same Identity")
else:
    print("Different Identity")

```

⑧ Write a program to display following pattern

```

1 2 3 4
1 2 3
1 2
1

```

Ans:

```

a = int(input("Enter the range:"))
for i in range(a):
    for j in range(a-i):
        if(j != 0):
            print(j, end=" ")
    print()

```

⑨ Write a program to reverse a given number.

Ans:

```

num = int(input("Enter a number:"))
rev = 0
while num > 0:
    digit = num % 10
    rev = (rev * 10) + digit
    num = num // 10

```

```

print("The reversed number is:", rev)

```

⑩ write a Sequential search function which searches an item in a sorted list. The function should return the index of element to be searched in the list.

Ans:

```

def sequential_search(sorted_list, item):
    for i in range(len(sorted_list)):
        if sorted_list[i] == item:
            return i
        elif sorted_list[i] > item:
            return -1

```

return -1

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Assignment 2.

- ① write a program to replace all occurrences of 'a' with '\$' in a string. (Ex. apple then output is \$apple).

Ans:

```
def replace_a_with_dollar(string):
    return string.replace('a', '$')

string = input("Enter one sentence")
string = replace_a_with_dollar(string)
print(string)
```

- ② write a python program to count the number of characters (character frequency) in a string.
Sample String: google.com
Expected Result: {'o': 3, 'g': 2, '.': 1, 'e': 1, 'l': 1, 'm': 1, 'c': 1}

Ans:

```
from collections import Counter

def count_characters(string):
    char_count = Counter(string)
    return dict(char_count)
```

```
result = count_characters(input("Enter string"))
print(result)
```

- ③ Write a Python program to get a string made of the first 2 & the last 2 chars from a given a string. If the string length is less

than 2, return instead of the empty string.

Sample String: 'General2'
Expected Result: 'Ge2'
Sample String: 'Ka'
Expected Result: 'Ka'
Sample String: 'K'
Expected string result: Empty String.

Ans:

```
def get_string(string):
    if len(string) < 2:
        return 'Empty String'
    else:
        return string[:2] + string[-2:]
```

```
print(get_string('Pravil'))
print(get_string('chinku'))
```

- ④ Write a python program to calculate the length of a string without using string function.

Ans:

```
string = input("Enter the string")
count = 0
```

```
for i in string:
    if (i == '\0'):
        break
    else:
```

```
count += 1
```

```
Print("length is", count)
```

```
new_s += s[i]
return new_s

s = input("Enter any string")
s = remove_odd_index(s)
print(s)
```

~~Answer~~
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