Tamrin 1

1. Function for reverse the string

In [16]:
```
def reverse_string(input_string:str) -> str:
    return input_string[::-1]
```

2. function for check the palindrome

In [17]:
```
def is_palindrome(input_string:str) -> bool:
    if input_string == reverse_string(input_string):
        return True
    return False
```

3. main

In [18]:
```
input_string = input()
if is_palindrome(input_string):
    print("true")
else:
    print('false')
```

```
kahak
true
```

---

tamrin 2

1. function to check number is prime or not

In [19]:
```
from math import sqrt


def is_prime(num):
    if num <= 1:
        return False
    for i in range(2, int(sqrt(num) + 1)):
        if num % i == 0:
            return False
    return True
```

2. function to get input and add them to list

In [20]:
```
def get_input():
    n = int(input())
    weights = []
    for i in range(n):
        weight = int(input())
        weights.append(weight)
    return weights
```

3. function to count how many numbers are prime and smaller than input number

In [21]:
```
def count_smaller_primes(n):
    count = 0
```

```
    for i in range(2, n):
        if is_prime(i):
            count += 1
    return count
```

4. function to count how many of dividers of number are prime

In [22]:
```
def count_prime_divider(n):
    count = 0
    for i in range(1, int(n / 2) + 1):
        if is_prime(i) and n % i == 0:
            count += 1
    return count
```

4. function to calculate the price

In [23]:
```
def calculate_price(weights: list):
    price = 0
    for weight in weights:
        if is_prime(weight):
            price += count_smaller_primes(weight)
        else:
            price += count_prime_divider(weight)
    return int(price)
```

5. function to calculate the discount

In [24]:
```
def calculate_discount(price: int):
    if is_prime(price):
        return count_smaller_primes(price)
    return count_prime_divider(price)
```

6. main

In [25]:
```
weights_list = get_input()
price_without_discount = calculate_price(weights_list)
discount = calculate_discount(price_without_discount)

print(price_without_discount - discount)
```

```
6
1
3
4
5
9
3
4
```

---

tamrin 3

1. function to count dividers

In [68]:
```
def count_divider(number):
    count = 2
    for i in range(2, int(number / 2) + 1):
        if number % i == 0:
```

```
            count += 1
    return count
```

2 . function to check number is good or not

In [69]:

```
def is_good_number(number):
    i = 1
    sum_of_i = 0
    while i < number:
        sum_of_i += i
        if sum_of_i == number:
            return True
        i += 1
    return False
```

3. main

In [72]:

```
k = int(input("k: "))
number = 2
while True:
    if count_divider(number) >= k and is_good_number(number):
        print(number)
        break
    number += 1
```

```
k: 4
6
```