

## Assignment Questions

1. Get a number from the user and check if the number is palindrome or not.

### CODE:

```
n=int(input("Enter number:"))
key=str(n)
if key[::-1]==key:
    a=int(key)
    print("The number %d is a palindrome" %a)
else:
    print("The number %d is not palindrome " %a)
```

### OUTPUT:

```
Enter number:121
The number 121 is a palindrome
```

OR

### Code:

```
n=int(input("Enter number:"))
temp=n
rev=0
while(n>0):
    reminder=n%10
    rev=rev*10+reminder
    n=n//10
if(temp==rev):
    print("The number is a palindrome")
else:
    print("The number isn't a palindrome")
```

```
output: Enter number:121
        The number is a palindrome
```

2. Print the prime numbers from 1 to 100.

### CODE:

```
def is_prime(n):
    key = True
    if n < 2:
        key = False
    else:
        for i in range(2,n):
            if n % i == 0:
                key = False
    return key

for n in range(1,101):
    if is_prime(n):
        if n==97:
            print(n)
        else:
```

```
print(n, ",", end='')
```

**OUTPUT:**

```
2 , 3 , 5 , 7 , 11 , 13 , 17 , 19 , 23 , 29 , 31 , 37 , 41 , 43 , 47 , 53 , 59  
, 61 , 67 , 71 , 73 , 79 , 83 , 89 , 97
```

**3. Define a function that takes a number from the user and prints all the factors of the number.**

**CODE:**

```
def print_factors(x):  
    print("The factors of", x, "are:")  
    for i in range(1, x + 1):  
        if x % i == 0:  
            print(i)  
  
num=120  
print_factors(num)
```

**OUTPUT:**

The factors of 120 are:

```
1  
2  
3  
4  
5  
6  
8  
10  
12  
15  
20  
24  
30  
40  
60  
120
```

**4. Print all the perfect numbers between 1 and 1000.**

(Hint: a number is perfect if the sum of factors of the number is the same as the number itself)

Eg: factors of 6 are 1, 2 & 3. Sum of 1, 2 & 3 is 6; hence 6 is a perfect number)

**CODE:**

```
n = int(input("Enter any number: "))  
sum1 = 0  
for i in range(1, n):  
    if(n % i == 0):  
        sum1 = sum1 + i  
if (sum1 == n):  
    print("The number is a Perfect number")  
else:  
    print("The number is not a Perfect number")
```

### OUTPUT:

```
Enter any number: 6
The number is a Perfect number
```

### 5. Define a function that takes a string as input from the user and perform the following:

if the first two characters are 'is' , return the string as such  
if not, add 'is' to the front of the string and return  
the result. Eg: i/p: 'isnull' o/p: 'isnull'

i/p: 'char' o/p: 'ischar'

### CODE:

```
string=input(str("enter string "))
if string[:2]=="is":
    print(string)
else:
    print("is"+string)
string=input(str("enter string "))
if string[:2]=="is":
    print(string)
else:
    print("is"+string)
```

### OUTPUT:

```
enter string isnull
isnull
enter string char
ischar
```

### 6. Define a function that takes a string as input and returns the number of characters present in the string

### CODE:

```
string= input("Enter string:")
char=0
word=1
for i in string:
    char=char+1
    if(i==' '):
        word=word+1
print("Number of words in the string:")
print(word)
print("Number of characters in the string:")
print(char)
```

**OUTPUT:**

Enter string:ganesh

Number of words in the string:

1

Number of characters in the string:

6