1. Print the first 10 natural numbers using a for loop?

```
n = int(input("Enter how many natural numbers to print: "))
for i in range(1, n + 1):
print(i)
```

OUTPUT:

```
Enter how many natural numbers to print: 12 1
2
3
4
5
6
7
8
9
10
11
12
```

2. Python program to check if the given string is a palindrome?

```
def is_palindrome(s):
s = s.lower().replace(" ", "")
# Convert to lowercase and remove spaces
return s == s[::-1]

string = input("Enter a string: ")
if is_palindrome(string):
print(f"'{string}' is a palindrome")
 else:
print(f"'{string}' is not a palindrome")
```

OUTPUT:

```
Enter a string: A man a plan a canal Panama
'A man a plan a canal Panama' is a palindrome
```

3. Python program to check if a given number is an Armstrong number?

```
def is_armstrong(number):
digits = [int(d) for d in str(number)]
power = len(digits)
return number == sum([d ** power for d in digits])

num = int(input("Enter a number: "))
if is_armstrong(num):
print(f"{num} is an Armstrong number")
else:
print(f"{num} is not an Armstrong number")
```

OUTPUT:

```
 Enter a number: 234
234 is not an Armstrong number

Enter a number: 9474
9474 is an Armstrong number
```

4. Python program to get the Fibonacci series between 0 to 50?

```
limit = int(input("Enter the upper limit for the Fibonacci
series: "))
a, b = 0, 1
while a <= limit:
 print(a, end=" ")
a, b = b, a + b
```

OUTPUT:

```
 Enter the upper limit for the Fibonacci series: 458 0 1 1 2
3 5 8 13 21 34 55 89 144 233 377
```

5. Python program to check the validity of password input by users?

```
import re

def  is_valid_password(password):
if len(password) < 6 or len(password) > 12:
 return False
if not re.search("[a-z]", password):
return False
if not re.search("[A-Z]", password):
return False
if not re.search("[0-9]", password):

return False

if not re.search("[@#$]", password):
return False
return True

password = input("Enter a password: ")
if is_valid_password(password):
print("Password is valid")
 else:
print("Password is invalid")
```

OUTPUT:

```
Enter a password: sanika
 Password is invalid

Enter a password: Password123#
Password is valid
```