

# PYTHON LAB – 6

## FOR LOOP

Name : Keerthana K R

ID : AF0363623

1. Print the first 10 natural numbers using for loop

```
print("The first 10 natural numbers are")
for i in range(1,11):
    print(i)
```

### OUTPUT

The first 10 natural numbers are

1  
2  
3  
4  
5  
6  
7  
8  
9  
10

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

```
String= input("Enter a string: ") #Takes input
word = ''.join(char.lower() for char in String if
char.isalnum()) #convert string to lower and removes all
spaces
for i in range(len(word)//2):
    if word[i] != word[-(i+1)]: #checks if string is palindrome
or not
        print(String, "is not a palindrome") #print if string is
not palindrome
        break
    else:
        print(String, "is a palindrome") #print if string is
palindrome
```

### OUTPUT

Enter a string: Madam, I'm Adam  
Madam, I'm Adam is a palindrome

---

Enter a string: My name is Keerthana  
My name is Keerthana is not a palindrome

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

```
num = int(input("Enter an integer: "))
n=str(num)
digit_sum = 0
for i in n:
    digit_sum = digit_sum + int(i)**len(n)
if int(n) == digit_sum:
    print(n, "is an Armstrong number")
else:
    print(n, "is not an Armstrong number")
```

#### OUTPUT

```
Enter an integer: 153
153 is an Armstrong number
```

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```
Enter an integer: 265
265 is not an Armstrong number
```

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

```
first_term = 0 #initialize first term
second_term = 1 #initialize second term
for i in range(50): #Setting range up to 50
    if(first_term>50):
        break
    print(first_term,end=" ")
    next_term = first_term + second_term
    first_term = second_term
    second_term = next_term
```

#### OUTPUT

0 1 1 2 3 5 8 13 21 34

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

```
print("Password length should be between 8 to 16.\nPassword  
should contain atleast 1 capital letter and a number" )  
user_password = input("Enter password : ")  
length=0  
lower = upper = digit = False  
if (len(user_password)>=8 and len(user_password)<=16):  
    length = True  
    for i in user_password:  
        if(i.islower()):  
            lower = True  
        elif(i.isupper()):  
            upper = True  
        elif(i.isdigit()):  
            digit = True  
if length and lower and upper and digit:  
    print('The password is a valid .')  
else:  
    print('The password is not valid.')
```

### OUTPUT

Password length should be between 8 to 16.  
Password should contain atleast 1 capital letter and a number

Enter password : Aforapple1  
The password is a valid .

---

Password length should be between 8 to 16.  
Password should contain atleast 1 capital letter and a number

Enter password : abc123  
The password is not valid.

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