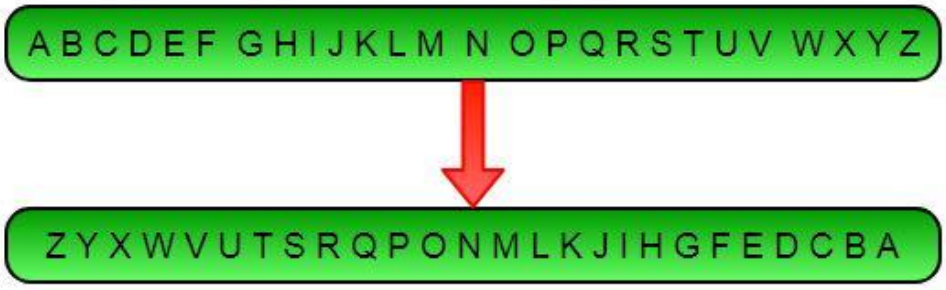
Atbash Cipher

Definition: Atbash cipher is a substitution cipher with just one specific key where all the letters are reversed, that is **A to Z** and **Z to A**. It was originally used to encode the Hebrew alphabets but it can be modified to encode any alphabet.

Relationship to Affine: Atbash cipher can be thought of as a special case of Affine cipher with both the keys being 25, i.e, **a = 25 & b = 25**



The key

Algorithm: The following key is used in the Atbash algorithm

```
ABCDEFGHIJKLMNOPQRSTUVWXYZ
ZYXWVUTSRQPONMLKJIHGFEDCBA
```

Implementation of Atbash Cipher

```python
#Encrypt and decrypt the string using Atbash cipher
n=26
def atbash_cipher(pt):
    res=""
    for i in pt:
        if i.isupper():
            res+=chr(91-(ord(i)-65)-1)
        elif i.islower():
            res+=chr(123-(ord(i)-97)-1)
        else:
            res+=i
    return res

text=input("Enter a text to encrypt using atbash : ")
atbash=atbash_cipher(text)
print(f"The Encrypted text using Atbash Cipher for given {text} is {atbash}")
```

O/p

```
┌──(kali㉿kali)-[~]
└─$ python lab4.py
Enter a text to encrypt using atbash : Hello
The Encrypted text using Atbash Cipher for given Hello is Svool
```