@Function To Check Whether A Number Falls In A Given Range

```
def fun(st,end,key):
    A = set()
    for i in range (st,end+1):
        A.add(i)
    print ("set A is:",A )
    if key in A:
        print(key,"is present in set A")
    else:
        print(key,"is absent in set A")
a = int(input("Enter starting point of the range:"))
b = int(input("Enter end point of the range:"))
n = int(input("Enter the element to find:"))
fun(a,b,n)
```

```
Enter starting point of the range:21
Enter end point of the range:50
Enter the element to find:34
set A is: {21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44
34 is present in set A
```

@Some board games require you to reduce the number of cards you are holding by half, rounded down. For instance, if you have 10 cards, you would reduce to 5 and if you had 11 cards you would also reduce to 5. With 12 cards you would reduce to 6. Write a program that asks the user to enter how many cards they have and print out what their hand would reduce to would reduce to under this rule.

```
num = int(input("Enter how many cards you have?"))
num1 = num//2
print (num1)
```

```
Enter how many cards you have?23
11
```

@Write a program that asks the user to enter a positive integer. Then generate a random number between that number and 10 more than that number and print the letter A that many times on the same line.

```
userno = int(input("Enter a positive number:"))
import random
print ("A"*random.randint(0,userno+10))
```

```
Enter a positive number:9
AAAAAAAA
```

@This is a very simple billing program. Ask the user for a starting hour and ending hour, both given in 24-hour format (e.g., 1 pm is 13, 2 pm is 14, etc..). The charge to use the service is $5.50 per hour. Print out the user's total bill. You can assume that the service will be used for at least 1 hour and never more than 23 hours. Be careful to take care of the case that the starting hour is before midnight and the ending time is after midnight.

```
starting_hour = int(input("Enter the starting hour"))
ending_hour = int(input("Enter the ending hour"))
if starting_hour < ending_hour:
  hours_worked = (ending_hour - starting_hour)
  total_amount = (5.50*hours_worked)
  print("The total bill of the user:", "$", total_amount)
else:
  print("Not exist")
```

```
Enter the starting hour 10
Enter the ending hour 19
The total bill of the user: $ 49.5
```