```
import random
import math
# Taking Inputs
lower = int(input("Enter Lower bound:- "))

# Taking Inputs
upper = int(input("Enter Upper bound:- "))

# generating random number between
# the lower and upper
x = random.randint(lower, upper)
print("\n\tYou've only ",
  round(math.log(upper - lower + 1, 2)),
  " chances to guess the integer!\n")

# Initializing the number of guesses.
count = 0

# for calculation of minimum number of
# guesses depends upon range
while count < math.log(upper - lower + 1, 2):
  count += 1

  # taking guessing number as input
  guess = int(input("Guess a number:- "))

  # Condition testing
  if x == guess:
    print("Congratulations you did it in ",
      count, " try")
    # Once guessed, loop will break
    break
  elif x > guess:
    print("You guessed too small!")
  elif x < guess:
    print("You Guessed too high!")
```

```
# If Guessing is more than required guesses,
# shows this output.
if count >= math.log(upper - lower + 1, 2):
  print("\nThe number is %d" % x)
  print("\tBetter Luck Next time!")
```

```
Enter Lower bound:- 1
Enter Upper bound:- 100

        You've only  7  chances to guess the integer!

Guess a number:- 50
You guessed too small!
Guess a number:- 75
You guessed too small!
Guess a number:- 60
You guessed too small!
Guess a number:- 90
You Guessed too high!
Guess a number:- 78
You guessed too small!
Guess a number:- 85
Congratulations you did it in  6  try
```

✓ 1m 16s completed at 12:46 AM