

## CHALLENGE 1

```
# Challenge1While.py
#
# @ author: A. N. Other
# date: September 2016

is_running = True

number = int(input("Please enter a number\n\n"))
counter = 0

while counter < number:
    print("[",counter + 1,"] ", end="")
    counter += 1

# Testing
'''
print("My assertions are:"
      "\nnumber = 6 output = [ 1 ] [ 2 ] [ 3 ] [ 4 ] [ 5 ] [ 6 ]"
      "\nnumber = 4 output = [ 1 ] [ 2 ] [ 3 ] [ 4 ]")
'''
```

## CHALLENGE 2

```
# Challenge2While.py
#
# @ author: A. N. Other
# date: September 2016

number = int(input("Please enter a number\n\n"))
counter = 0
total = 0

while counter <= number:
    total = total + counter
    counter += 1

print("\nn = ", number, " sum = ",total,"\n\n")

# Testing
'''
```

```
print("My assertions are:"
      "\nnumber = 5 output = 15"
      "\nnumber = 19 output = 190")
...
```

### CHALLENGE 3

```
# Challenge3While.py
#
# @ author: A. N. Other
# date: April 2019

p = int(input("Please enter an increment\n\n"))
q = int(input("Please enter an ending number\n\n"))

counter = 10
number = 10

starting_number = (10 % p) + 10

while counter < q:
    print(starting_number,end=", ")
    starting_number = starting_number + p
    counter += p

# Testing
...
print("My assertions are:"
      "\np = 4, q = 25 output = 12,16,20,24"
      "\np = 3, q = 17 output = 12,15")
...
```

### CHALLENGE 4

```
# Challenge4While.py
#
```

```

# @ author: A. N. Other
# date: September 2016

password = (input("Please enter a password\n\n"))
stored_password_variable = "Welcome1234"
counter = 0
correct_flag = False

while counter < 2 and correct_flag == False:
    if password == stored_password_variable:
        print("\nCorrect password\n\n")
        correct_flag = True
    elif password == "Exit":
        print("\nProgramme terminated\n\n")
        correct_flag = True
    else:
        print("\nIncorrect password\n\n")
        password = (input("Please enter a password\n\n"))
        counter += 1

# Testing
'''
print("My assertions are:"
      "\npassword = Welcome1234, output = Correct password"
      "\npassword = Exit, output = Program terminated"
      "\npassword = hello, output = Gives three attempts or until correct
password is entered.")
'''

```

## CHALLENGE 5

```

# Challenge5While.py
#
# @ author: A. N. Other
# date: September 2016

guess = int(input("Guess a number\n\n"))
last_guess = int
secret_number = 42
counter = 0
found = False

while found != True:
    if guess > secret_number:

```

```

        print("\nToo high try again\n\n")
        if last_guess != guess:
            counter +=1
        last_guess = guess
        guess = int(input("Guess a number\n\n"))
    elif guess < secret_number:
        print("\nToo low try again\n\n")
        if last_guess != guess:
            counter +=1
        last_guess = guess
        guess = int(input("Guess a number\n\n"))
    else:
        counter +=1
        print("\nThat is correct!\n\n")
        found = True

print("\nYou had ", counter, " guesses\n\n")

# Testing
'''
print("My assertions are:"
      "\nguess = 32 then 42, output = too low, counter = 2"
      "\nguess = 53 then 42, output = too high, counter = 2"
      "\nguess = repeated value of 32, output = Correct and counter = 2")
'''

```