**Student Questions:**

Use the following code as a template for generating random numbers in your programs.

# This code generates a random number between 0 to 9

# Stores the value of the random number in the variable "targetNumber"

# Then prints out the result

import random

targetNumber = random.randint(0,9)

print("The random number %d is the target." % targetNumber)

1. Create a basic level program to implement a simple guessing game. Your program should do the following: (Provide a listing of your program below.)
   1. Generate and store a random number using the template code above
   2. Ask the user to guess the number (i.e. us the “input” command and sore the answer)
   3. Use an “if” statement to check if the guess is correct
   4. Print “Your guess was correct!” if the guess is correct
   5. Print “Try again” is the check is guess is wrong

# This code generates a random number between 0 to 9

# Stores the value of the random number in the variable "targetNumber"

# Then prints out the result

import random

targetNumber = random.randint(0,9)

print("The random number %d is the target." % targetNumber)

guesseNumber = int(input("Guess a number from between 0 and 9: \n"))

while guesseNumber != targetNumber :

print ("Try again. \n")

guesseNumber = int(input("Guess again:"))

if guesseNumber == targetNumber :

print("Your guess is correct!")

1. Create a medium level program to implement a better guessing game. Add the following to your basic level program: (Provide a listing of your program below.)
   1. Use “if” and “elif” statements to check if the guess is correct
   2. Print “Your guess was correct!” if the guess is correct
   3. Print “guess higher” if the guess was less than the target number
   4. Print “guess lower” if the guess was greater than the target number

print(" ")

# This code generates a random number between 0 to 9

# Stores the value of the random number in the variable "targetNumber"

# Then prints out the result

import random

targetNumber = random.randint(0,9)

print("The random number %d is the target." % targetNumber)

guess = int(input("Guess my number:"))

print ("")

while (guess!=targetNumber):

if (guess<targetNumber):

print ("That is incorrect, the number is higher than", targetNumber)

guess = int(input("Guess my number:"))

elif (guess>targetNumber):

print ("That is incorrect, the number is lower than", targetNumber)

guess = int(input("Guess my number:"))

else: print("That is correct!")

1. Create an enhanced level program to implement the ultimate guessing game. Add the following to your medium level program: (Provide a listing of your program below.)
   1. Add a loop to keep playing the game until the target number is guessed correctly
   2. Exit the loop when the target number is guessed correctly

print(" ")

# This code generates a random number between 0 to 9

# Stores the value of the random number in the variable "targetNumber"

# Then prints out the result

import random

targetNumber = random.randint(0,9)

print("The random number %d is the target." % targetNumber)

guess = int(input("Guess my number:"))

print ("")

while (guess!=targetNumber):

if (guess<targetNumber):

print ("That is incorrect, the number is higher than", targetNumber)

guess = int(input("Guess my number:"))

elif (guess>targetNumber):

print ("That is incorrect, the number is lower than", targetNumber)

guess = int(input("Guess my number:"))

else: print("That is correct!")