Lab #01

Programming and Algorithms

1. Just to remind ourselves how to use Python, please type in and run the following programs:

# PROGRAM IsOddOrEven:

x = int(input("Please input the number\n"))

if (x % 2) != 0:

# THEN

 print(x, "is odd")

else:

 print(x, "is even")

# ENDIF;

# END.

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# PROGRAM CheckPrime:

a = int(input("Please input value:"))

b = a - 1

IsPrime = True

while b != 1:

# DO

 if a % b == 0:

 # THEN

 IsPrime = False

 # ENDIF;

 b = b - 1

# ENDWHILE;

if IsPrime == True:

# THEN

 print(a, "is a prime number")

else:

 print(a, "is not a prime number")

# ENDIF;

# END.

# PROGRAM AvgVal:

Age = [44, 23, 42, 33, 18, 54, 34, 16]

Total = 0

for index in range(0,len(Age)):

# DO

 Total = Total + Age[index]

# ENDFOR;

print(Total/len(Age))

# END.

# PROGRAM Bubblesort:

Age = [44, 23, 42, 33, 18, 54, 34, 16]

for outerindex in range(0,len(Age)):

# DO

 for index in range(0,len(Age)-1):

 # DO

 if Age[index+1] < Age[index]:

 # THEN

 TempValue = Age[index+1]

 Age[index+1] = Age[index]

 Age[index] = TempValue

 # ENDIF;

 # ENDFOR;

# ENDFOR;

print(Age)

# END.

Take screengrabs of each program running.

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| e-mail me a completed solution to each of the above programs in a Word document. e-mail to Damian.X.Gordon@TUDublin.ie with subject heading “DT249 OOP Lab #01” |