ICTPRG302 - Apply introductory programming techniques –

Session 7 Worksheet

for Loops in Python

Task 1. Write a program to create the multiplication table (from 1 to 11) of a number.

# this program will create a multiplication table

number = int(...) # replace ... with your code, use input() function

# use for loop to iterate 10 times

for i in range(1,...): # replace ... with your code

print(number,'x',i,'=', ... \* i) # replace ... with your code

Output:

Text

Description automatically generated

Task 2. Write a program that will count the number of even and odd numbers from a series of numbers. Complete the following code.

# Declaring the tuple

numbers = (1, 2, 3, 4, 5, 6, 7, 8, 9, 10)

count\_odd = 0

count\_even = 0

for i in numbers:

if not i % ? : # replace ? with your code

count\_even += ? # replace ? with your code

else:

count\_odd = count\_odd + 1

print("Number of even numbers :",...) # replace ... with your code

print("Number of odd numbers :",...) # replace ... with your code

Output:

A picture containing icon

Description automatically generated

Task 3. Lottery Number (Powerball)

Write a program that automatically generates six random numbers from 1 to 35 (Winning numbers), and 1 from 1 to 20 (the Powerball). Use the code below. For testing purposes, you can store your numbers directly into the code. Finally, your program needs to inform the end user on how many numbers are guessed correctly.

import random

my\_numbers = [?, ?, ?, ?, ?, ?] # replace ? with your numbers between 1 and 35

print("Your numbers are:", my\_numbers)

my\_powerball = ? # replace ? with your number between 1 and 20

print("Your powerball number is:", my\_powerball)

lottery\_numbers = random.sample(range(1,?), 6) # replace ? with your code

lottery\_numbers.sort()

print("The winning numbers are:", lottery\_numbers)

powerball\_num = random.choice(range(1, ?)) # replace ? with your code

print("The Powerball number is:", powerball\_num)

winning = 0

for number in my\_numbers:

if number in lottery\_numbers:

winning += 1

print ("\nPoweball Results.\nTotal winning numbers:", winning)

if my\_powerball == powerball\_num: print("and P'ball")

Output example:

Text

Description automatically generated