

## **Junior Knights Python 1 Exercises for 2/1/2025**

### **Part A: For Loop Review**

Asks the user to enter a number. Print the multiplication table for that number (from 1 to user choice).

#### **Sample Program Run**

Which times table do you want to print?

**5**

How many entries do you want?

**6**

5 x 1 = 5

5 x 2 = 10

5 x 3 = 15

5 x 4 = 20

5 x 5 = 25

5 x 6 = 30

### **Part B: Digits in a Number**

Ask a user for a number and determine how many digits are in the number. (Note: You can solve this without a loop!)

#### **Sample Program Run**

Please enter a number.

**582**

There are 3 digits in 582.

### **Part C: Odd Number Sum Calculator**

Ask a user to enter numbers continuously until they end the calculator by inputting -1. Only add the odd numbers provided by the user.

#### **Sample Program Run**

Enter a number (-1 to stop):

**7**

Enter a number (-1 to stop):

**9**

Enter a number (-1 to stop):

**12**

Even number ignored.

Enter a number (-1 to stop):

**-1**

Sum of odd numbers: 16

### **Part D: Random Sentence Generator**

Write a program that generates a random short sentence using random words from predefined lists.

The program should have 3 lists:

- Subjects (e.g., "The cat", "A scientist", "My best friend")
- Verbs (e.g., "jumps over", "invents", "eats")
- Objects (e.g., "a fence", "a time machine", "a giant sandwich")

Ask the user if they want another sentence (yes/no). Stop generating when the user enters "no".

#### **Sample Program Run**

Random sentence: The astronaut discovers a hidden treasure.

Would you like another sentence? (yes/no):

**yes**

Random sentence: My dog eats a giant pizza.

Would you like another sentence? (yes/no):

**no**

Goodbye!

### **Part E: Sum of Digits (Challenge Problem!)**

Ask a user for a number and determine the sum of the digits in that number.

#### **Sample Program Run**

Please enter a number.

**582**

The sum of the digits in 582 is 15.