

- Q1: You have a list of integers, and you want to check if any of the numbers are even. Write a function to accomplish this task. Test the code with examples. Write comments and docstring to explain the code.

```
import random
def check_even(num_list):
    for num in num_list:
        if num%2 == 0:
            return True
    return False
num_list = [random.randint(1,100) for i in range(10)]
print(num_list)
print(check_even(num_list))

[27, 87, 33, 20, 18, 97, 57, 22, 62, 14]
True
```

- Q2: Write a function that asks the user to enter a number and then prints the number with commas. Test the code with examples. Write comments and docstring to explain the code.

```
import random
def add_commas(num):
    return "{:,}".format(num)
num = random.randint(1000,1000000000)
print(num)
print(add_commas(num))

91613767
91,613,767
```

- Q3: You are building a program that takes user input and checks if it is a palindrome. Write a function to achieve this. Test the code with examples. Write comments and docstring to explain the code.

```
import random
def is_palindrome(word):
    return word == word[::-1]
word = input("Enter a word: ")
print(word)
print(is_palindrome(word))

123
False
```

- Q4: Write a function that asks the user to enter a number, checks if it is prime, and then prints a message informing the user of the result. Test the code with examples. Write comments and docstring to explain the code.

```
import random
def is_prime(num):
    if num == 1:
        return False
    for i in range(2,num):
```

```

        if num%i == 0:
            return False
    return True
num = random.randint(1,100)
print(num)
print(is_prime(num))

```

80
False

- Q5: You are building a program that reads data from a text file and writes it to a new text file, with each line of the original file concatenated with the line number. Write a function to accomplish this task. Test the code with examples. Write comments and docstring to explain the code

```

import random
def read_write_file(file_name):
    with open(file_name) as f:
        lines = f.readlines()
    with open("new_"+file_name,"w") as f:
        for i,line in enumerate(lines):
            f.write(str(i+1)+". "+line)
file_name = input("Enter file name: ")
read_write_file(file_name)

```