Objectives:

* Random class

**There are 2 challenge exercises with 2 print screens, each worth 50%**

Please submit this document for grading when completed… Please work in groups.

A random class allows the computer to assign random numbers. We use the import statement to use the random class.

**Project #1** (using the random class), notice that we use the import statement to use the random class.

The **randint** means to use random numbers between 1-10, try increasing the numbers, and rerun the program.

Graphical user interface, text, application, chat or text message

Description automatically generated

Here is an example using the for loop to print the random numbers.

Graphical user interface, text, application

Description automatically generated

**Project #2** (Heads and Tails)

Text

Description automatically generated

**Project #3** (the rock, paper, scissor game)

A picture containing table

Description automatically generatedText

Description automatically generated

**Project #4** (using the math class)

Graphical user interface, text, application

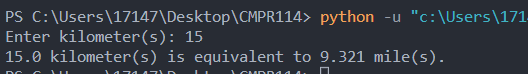
Description automatically generated

**Challenge Exercise #1:** complete the following program using a function.

Text

Description automatically generated

**#1 Print screen the output with the code below here.**



Code:

def convert\_to\_miles(input):

convert\_val = input \* 0.6214

return convert\_val

def main():

userinput = float(input("Enter kilometer(s): "))

newval = convert\_to\_miles(userinput)

print(f"{userinput} kilometer(s) is equivalent to {newval} mile(s).")

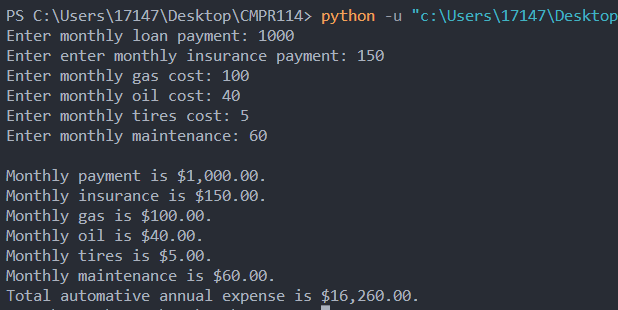
main()

**Challenge Exercise #2:** complete the following program using a function.

Text

Description automatically generated

**#2 Print screen the output with the code below here.**



Code:

def yearly\_auto\_expense(payment, insurance, gas, oil, tires, maintenance):

totalexpense = (payment + insurance + gas + oil + tires + maintenance) \* 12

return totalexpense

def main():

payment = float(input("Enter monthly loan payment: "))

insurance = float(input("Enter enter monthly insurance payment: "))

gas = float(input("Enter monthly gas cost: "))

oil = float(input("Enter monthly oil cost: "))

tires = float(input("Enter monthly tires cost: "))

maintenance = float(input("Enter monthly maintenance: "))

annualexpense = yearly\_auto\_expense(payment, insurance, gas, oil, tires, maintenance)

print(f"\nMonthly payment is ${payment:,.2f}.")

print(f"Monthly insurance is ${insurance:,.2f}.")

print(f"Monthly gas is ${gas:,.2f}.")

print(f"Monthly oil is ${oil:,.2f}.")

print(f"Monthly tires is ${tires:,.2f}.")

print(f"Monthly maintenance is ${maintenance:,.2f}.")

print(f"Total automative annual expense is ${annualexpense:,.2f}.")

main()

**Submit this document to the Module 2 Class Exercise.**