# TASK-01

**BUILD A TEMPERATURE CONVERSION PROGRAM**

**def convert\_temperature(value, from\_unit, to\_unit):**

**"""Converts temperature from one unit to another.**

**Args:**

**value: The temperature value to be converted.**

**from\_unit: The unit the temperature is currently in (e.g., "C" for Celsius, "F" for Fahrenheit).**

**to\_unit: The unit to convert the temperature to (e.g., "C" for Celsius, "F" for Fahrenheit).**

**Returns:**

**The converted temperature value or None if invalid units are provided.**

**"""**

**if from\_unit.upper() == "C" and to\_unit.upper() == "F":**

**return (value \* 9/5) + 32**

**elif from\_unit.upper() == "F" and to\_unit.upper() == "C":**

**return (value - 32) \* 5/9**

**else:**

**print("Invalid unit conversion. Please use 'C' for Celsius or 'F' for Fahrenheit.")**

**return None**

**def main():**

**"""Prompts user for temperature value, units, and performs conversion."""**

**print("Temperature Conversion Program")**

**while True:**

**try:**

**value = float(input("Enter the temperature value: "))**

**from\_unit = input("Enter the current unit (C or F): ")**

**to\_unit = input("Enter the unit to convert to (C or F): ")**

**break**

**except ValueError:**

**print("Invalid input. Please enter a number for temperature value.")**

**converted\_value = convert\_temperature(value, from\_unit, to\_unit)**

**if converted\_value is not None:**

**print(f"{value}{from\_unit.upper()} is equal to {converted\_value:.2f}{to\_unit.upper()}")**

**else:**

**print("Conversion failed.")**

**if \_\_name\_\_ == "\_\_main\_\_":**

**main()**

# TASK-02

CREATE A GUESSING GAME

from tkinter import \*

import random

class GuessingGame:

def \_\_init\_\_(self, master):

self.master = master

master.title("Guessing Game")

# Set up game variables

self.secret\_number = random.randint(1, 100)

self.num\_guesses = 0

self.guess\_entry = None

self.feedback\_label = None

self.init\_widgets()

def init\_widgets(self):

# Instruction label

instruction\_label = Label(self.master, text="Guess a number between 1 and 100:")

instruction\_label.pack()

# Entry for user guess

self.guess\_entry = Entry(self.master)

self.guess\_entry.pack()

# Guess button

guess\_button = Button(self.master, text="Guess", command=self.check\_guess)

guess\_button.pack()

# Feedback label

self.feedback\_label = Label(self.master, text="")

self.feedback\_label.pack()

def check\_guess(self):

# Get user guess and validate input

try:

guess = int(self.guess\_entry.get())

self.guess\_entry.delete(0, END) # Clear entry after each guess

except ValueError:

self.feedback\_label.config(text="Invalid input. Please enter a number.")

return

# Update number of guesses

self.num\_guesses += 1

# Check guess and provide feedback

if guess == self.secret\_number:

self.feedback\_label.config(text=f"Congratulations! You guessed the number in {self.num\_guesses} tries.")

elif guess < self.secret\_number:

self.feedback\_label.config(text="Too low. Try again!")

else:

self.feedback\_label.config(text="Too high. Try again!")

# Create the main window and run the game

root = Tk()

game = GuessingGame(root)

root.mainloop()

**TT**

**TAtemperatures between Celsius, Fahrenheit, and Kles. The program should prompt the user to input a temperature value and the original unit of measurement. It should then convert the temperature to the other two units and display the converted values to the user. For example, if the user enters a temperature of 25 degrees Celsius, the program should convert it to Fahrenheit and Kelvin, and present the converted value Celsius, Fahrenheit, and Kelvin scales. The program should prompt the user to input a temperature value and the original unit of measurement. It should then convert the temperature to the other two units and display the converted values to the user. For example, if the user enters a temperature of 25 degrees Celsius, the program should convert it to Fahrenheit and Kelvin, and present the converted values as outputs.**