#Python Code that would help users know how to recycle waste

#function and classes

class Trash:

def \_\_init\_\_(self, name, material, is\_hazardous, is\_wet):

self.name = name

self.material = material

self.is\_hazardous = is\_hazardous

self.is\_wet = is\_wet

def disposal\_recommendation(self):

# sorting

if self.is\_hazardous:

return "Dispose of the item at a hazardous waste facility."

else:

if self.material == "plastic" and not self.is\_wet:

return "Place the item in the recycling bin."

elif self.material == "paper" and not self.is\_wet:

return "Place the item in the recycling bin."

elif self.material == "organic":

return "Place the item in the compost bin."

elif self.material == "metal":

return "Send to a metal scrap yard."

elif self.material == "glass":

return "Place the item in the recycling bin."

else:

return "Place the item in the general trash bin."

def get\_yes\_no(prompt):

#boolean for hazardous and wet options

while True:

response = input(prompt + " (yes/no): ").strip().lower()

if response == "yes":

return True

elif response == "no":

return False

else:

print("Invalid input. Please enter 'yes' or 'no'.")

def choose\_material():

#select material type

print("\nSelect the material type of the item:")

print("1. Plastic")

print("2. Paper")

print("3. Organic")

print("4. Metal")

print("5. Glass")

while True:

try:

choice = int(input("Enter the number corresponding to the material type: "))

if choice == 1:

return "plastic"

elif choice == 2:

return "paper"

elif choice == 3:

return "organic"

elif choice == 4:

return "metal"

elif choice == 5:

return "glass"

else:

print("Invalid choice. Please choose a number between 1 and 6.")

except ValueError:

print("Invalid input. Please enter a valid number.")

def display\_material\_table():

#arrays

#table showing how to recycle

disposal\_table = [

["Plastic", "Recycling bin (if not wet)"],

["Paper", "Recycling bin (if not wet)"],

["Organic", "Compost bin"],

["Metal", "Metal scrap yard"],

["Glass", "Recycling bin"],

["Hazardous", "Hazardous waste facility"],

["Other", "General trash bin"]

]

print("\n--- Material Disposal Table ---")

print(f"{'Material':<12} | {'Disposal Recommendation'}")

print("-" \* 40)

for row in disposal\_table:

print(f"{row[0]:<12} | {row[1]}")

print("-" \* 40)

def main():

#menu

while True:

print("\nWelcome to the Trash Disposal Helper!")

print("1. Analyze an item")

print("2. View material disposal table")

print("3. Exit the program")

try:

choice = int(input("Enter your choice: "))

if choice == 1:

# Analyze a new item

name = input("\nWhat is the name of the item you want to dispose of? ").strip()

material = choose\_material()

is\_hazardous = get\_yes\_no("Is the item hazardous")

is\_wet = get\_yes\_no("Is the item wet")

item = Trash(name, material, is\_hazardous, is\_wet)

# Get disposal recommendation

recommendation = item.disposal\_recommendation()

# Display recommendation

print(f"\nItem: {item.name}")

print(f"Material: {item.material}")

print(f"Hazardous: {'Yes' if is\_hazardous else 'No'}")

print(f"Wet: {'Yes' if is\_wet else 'No'}")

print(f"Recommendation: {recommendation}")

elif choice == 2:

# Display the material disposal table

display\_material\_table()

elif choice == 3:

# Exit the program

print("\nThank you for using the Trash Disposal Helper. Goodbye!")

break

else:

print("Invalid choice. Please select 1, 2, or 3.")

except ValueError:

print("Invalid input. Please enter a number.")

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

main()