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**Problem Statement: E-Waste Monitoring System**

**Context:**

* **Who Needs It?**: Government and private organizations.
* **Why Is It Important?**: These organizations regularly use electronic items that might need to be replaced over time. When new gadgets with better features are developed, old ones may become waste.

**The Challenge:**

* **The Problem**: As technology advances, old electronic items become outdated and turn into E-waste. This waste needs to be managed properly to avoid environmental harm.
* **The Need**: There should be a software system that helps organizations keep track of their electronic items, monitor when they need to be replaced, and manage the recycling of these items efficiently.

**Your Task:**

* **Build a Solution**: Create a simple software application (a console-based program) that can:
  1. **Collect Information**: Allow users to enter details about their electronic items (like name, purchase date, and expected lifespan).
  2. **Monitor Status**: Check whether each item is still in use or if it needs to be replaced.
  3. **Manage Recycling**: Identify items that are due for recycling and notify the user.

**Expected Output**:

* The output should be shown in the console (text-based).
* No need for a graphical interface or a database; just keep it simple.

This system will help organizations manage their electronic waste better by keeping track of what needs to be recycled, ensuring they make the most of new technology while also being environmentally responsible.

Code:

from datetime import datetime, timedelta

class E\_WasteItem:

def \_\_init\_\_(self, name, purchase\_date, lifespan\_years):

self.name = name

self.purchase\_date = datetime.strptime(purchase\_date, "%Y-%m-%d")

self.lifespan\_years = lifespan\_years

self.expiry\_date = self.purchase\_date + timedelta(days=lifespan\_years \* 365)

def check\_status(self):

today = datetime.now()

if today >= self.expiry\_date:

return f"{self.name} is due for recycling."

else:

return f"{self.name} is still in use."

def main():

items = []

while True:

print("\n--- E-waste Monitoring System ---")

print("1. Add Electronic Item")

print("2. Check Item Status")

print("3. Exit")

choice = input("Enter your choice: ")

if choice == '1':

name = input("Enter item name: ")

purchase\_date = input("Enter purchase date (YYYY-MM-DD): ")

lifespan\_years = int(input("Enter expected lifespan (years): "))

item = E\_WasteItem(name, purchase\_date, lifespan\_years)

items.append(item)

print(f"{name} added successfully!")

elif choice == '2':

for item in items:

print(item.check\_status())

elif choice == '3':

print("Exiting...")

break

else:

print("Invalid choice, please try again.")

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

main()

**OUTPUT:**



