MEDICAL INVENTORY MANAGEMENT

CODING:

```python
import json
import os

INVENTORY_FILE = "inventory.json"

def load_inventory():
    if os.path.exists(INVENTORY_FILE):
        with open(INVENTORY_FILE, 'r') as f:
            return json.load(f)
    return {}

def save_inventory(inventory):
    with open(INVENTORY_FILE, 'w') as f:
        json.dump(inventory, f, indent=4)

def add_medicine(inventory):
    med_id = input("Enter medicine ID: ")
    if med_id in inventory:
        print("Medicine ID already exists.")
        return
    name = input("Enter medicine name: ")
    quantity = int(input("Enter quantity: "))
    expiry = input("Enter expiry date (YYYY-MM-DD): ")

    inventory[med_id] = {
        "name": name,
        "quantity": quantity,
        "expiry": expiry
    }
    print("Medicine added successfully.")

def view_inventory(inventory):
    if not inventory:
        print("Inventory is empty.")
```

```python
        return
    print("\n--- Medical Inventory ---")
    for med_id, details in inventory.items():
        print(f"ID: {med_id}")
        print(f"  Name: {details['name']}")
        print(f"  Quantity: {details['quantity']}")
        print(f"  Expiry: {details['expiry']}")
        print("-------------------------")

def update_quantity(inventory):
    med_id = input("Enter medicine ID to update: ")
    if med_id not in inventory:
        print("Medicine ID not found.")
        return
    new_qty = int(input("Enter new quantity: "))
    inventory[med_id]["quantity"] = new_qty
    print("Quantity updated.")

def delete_medicine(inventory):
    med_id = input("Enter medicine ID to delete: ")
    if med_id in inventory:
        del inventory[med_id]
        print("Medicine deleted.")
    else:
        print("Medicine ID not found.")

def search_medicine(inventory):
    search_name = input("Enter medicine name to search: ").lower()
    found = False
    for med_id, details in inventory.items():
        if search_name in details["name"].lower():
            print(f"ID: {med_id} | Name: {details['name']} | Qty: {details['quantity']} | Expiry: {details['expiry']}")
            found = True
    if not found:
        print("No matching medicine found.")

def main():
    inventory = load_inventory()
```

```python
    while True:
        print("\n--- Medical Inventory Menu ---")
        print("1. Add Medicine")
        print("2. View Inventory")
        print("3. Update Quantity")
        print("4. Delete Medicine")
        print("5. Search Medicine")
        print("6. Exit")
        choice = input("Enter your choice (1-6): ")

        if choice == '1':
            add_medicine(inventory)
        elif choice == '2':
            view_inventory(inventory)
        elif choice == '3':
            update_quantity(inventory)
        elif choice == '4':
            delete_medicine(inventory)
        elif choice == '5':
            search_medicine(inventory)
        elif choice == '6':
            save_inventory(inventory)
            print("Exiting... Inventory saved.")
            break
        else:
            print("Invalid choice. Please try again.")

if __name__ == "__main__":
    main()
```

OUTPUT:

1. Add Medicine

2. View Inventory

3. Update Quantity

4. Delete Medicine

5. Search Medicine
6. Exit

   Enter your choice (1-6): 1

Enter medicine ID:3pl

Enter medicine name:paracetamol

Enter quantity:100

Enter expiry date (YYYY-MM-DD):2026-11-14

Medicine added successfully.

   Enter your choice (1-6): 2

Medicine ID:3pl

Name:paracetamol

Quantity:100

Expiry date (YYYY-MM-DD):2026-11-14

   Enter your choice (1-6): 3

Enter medicine ID to update:30

Enter new quantity:200

Quantity updated.

   Enter your choice (1-6): 5

Enter medicine name to search: Paracetamol

Medicine ID:3pl

Name:paracetamol

Quantity:100

Expiry date (YYYY-MM-DD):2026-11-14

Enter your choice (1-6): 4

Enter medicine ID to delete:30

Medicine deleted.