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# Simple Student Registration System

# Step 1 & 2: Basic student details with casting
name = input("Enter student's name: ")
age = int(input("Enter student's age: "))
gpa = float(input("Enter student's GPA: "))

# Step 3: List of favorite subjects
subjects = input("Enter favorite subjects (comma separated): ").split(",")

# Step 4: Tuple for permanent subjects
permanent_subjects = ("Math", "English", "Science")

# Step 5: Set for extracurricular activities
activities = set(input("Enter extracurricular activities (comma separated): ").split(","))

# Step 6: Dictionary to store student info
student = {
    "name": name,
    "age": age,
    "gpa": gpa,
    "subjects": subjects,
    "permanent_subjects": permanent_subjects,
    "activities": activities
}

# Step 7: While loop for menu
while True:
    print("\nMenu: view / update / add / exit")
    choice = input("Enter your choice: ").lower()

    # Step 8 & 9: Match statement for menu options
    match choice:
        case "view":
            print("\n--- Student Information ---")
            print("Name:", student["name"])
            print("Age:", student["age"])
            print("GPA:", student["gpa"])
            print("Favorite Subjects:", student["subjects"])
            print("Permanent Subjects:", student["permanent_subjects"])
            print("Activities:", student["activities"])

        case "update":
            field = input("Which field do you want to update? (name/age/gpa): ").lower()
            # Step 13: If/else for updating
            if field == "name":
                student["name"] = input("Enter new name: ")
            elif field == "age":
                student["age"] = int(input("Enter new age: "))
            elif field == "gpa":
                student["gpa"] = float(input("Enter new GPA: "))
            else:
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            print("Invalid field name.")

    case "add":
        new_activity = input("Enter new activity to add: ")
        student["activities"].add(new_activity)
        print("Activity added!")

    case "exit":
        print("Exiting program... Goodbye!")
        break

    case _:
        # Step 14: Invalid choice
        print("Invalid choice. Please try again.")
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