PET ADOPTION SYSTEM

OUTPUT SCREENSHOTS:

1. Multiple login (Admin/User)

```
F:\pet_adoption>java Main
=== Welcome to Pet Adoption System ===
Data Storage: CSV Files


==================================================
Role Selection
==================================================
1. Admin
2. User
Type 'exit' or 'q' to quit.
Enter choice (1/2): 1
Enter admin security number (PIN): 12345
Authentication successful. Welcome, Admin!
```

2. Add sample data

```
=================================================
                ADMIN MENU
=================================================
1.   Add Sample Data
2.   Register New Pet
3.   Register New Foster Home
4.   List Registered Adopters
5.   List Foster Homes
6.   Process Next Adoption
7.   Manage Foster Care
8.   System Status
9.   View Adoption Queue
10.  Customer Service (view/respond tickets)
0.   Logout (return to role selection)
-------------------------------------------------
Choose an option: 1

=== ADD SAMPLE DATA ===
Adding sample data...
Pet added: Buddy
Pet added: Whiskers
No suitable foster home found for pet: Whiskers
â?? Sample pets added: Buddy (Dog) and Whiskers (Cat)
Adopter registered: John Doe
Adopter registered: Sarah Smith
â?? Sample adopters added: John Doe and Sarah Smith
Foster home added: Happy Paws Foster
â?? Sample foster home added: Happy Paws Foster

Sample data added successfully!
All data has been automatically saved to CSV files.
```

3. Add new Foster Home

```
====================================================
                ADMIN MENU
====================================================
1.   Add Sample Data
2.   Register New Pet
3.   Register New Foster Home
4.   List Registered Adopters
5.   List Foster Homes
6.   Process Next Adoption
7.   Manage Foster Care
8.   System Status
9.   View Adoption Queue
10.  Customer Service (view/respond tickets)
0.   Logout (return to role selection)
----------------------------------------------------
Choose an option: 3

=== REGISTER NEW FOSTER HOME ===
ID: FOSTER002
Name: Second Chance Foster
Contact Info: 9087712345
Capacity: 2
Specializations (comma separated - sick,elderly,special_needs): special_needs,elderly
Foster home added: Second Chance Foster
â?? Foster home registered successfully and saved to foster_homes.csv
```

4. Add new pets (sick, healthy and special needs)

```
=======================================================
                ADMIN MENU
=======================================================
1.   Add Sample Data
2.   Register New Pet
3.   Register New Foster Home
4.   List Registered Adopters
5.   List Foster Homes
6.   Process Next Adoption
7.   Manage Foster Care
8.   System Status
9.   View Adoption Queue
10.  Customer Service (view/respond tickets)
0.   Logout (return to role selection)
-------------------------------------------------------
Choose an option: 2

=== REGISTER NEW PET ===
Pet Type (1-Dog, 2-Cat): 1
ID: PET003
Name: Rocky
Breed: German Shepherd
Age: 2
Gender (male/female): male
Size (small/medium/large): large
Energy Level (1-10): 9
Good with children? (true/false): true
Requires yard? (true/false): true
Does this pet need medical care/foster care? (yes/no): no
â?? Pet registered as healthy and available for immediate adoption.
Pet added: Rocky
â?? Pet registered successfully and saved to pets.csv
```

```
================================================
               ADMIN MENU
================================================
1.   Add Sample Data
2.   Register New Pet
3.   Register New Foster Home
4.   List Registered Adopters
5.   List Foster Homes
6.   Process Next Adoption
7.   Manage Foster Care
8.   System Status
9.   View Adoption Queue
10.  Customer Service (view/respond tickets)
0.   Logout (return to role selection)
------------------------------------------------
Choose an option: 2

=== REGISTER NEW PET ===
Pet Type (1-Dog, 2-Cat): 2
ID: PET004
Name: Luna
Breed: Siamese
Age: 1
Gender (male/female): female
Indoor only? (true/false): true
Gets along with other cats? (true/false): true
Gets along with dogs? (true/false): false
Temperament (calm/playful/shy/independent): shy
Does this pet need medical care/foster care? (yes/no): yes
Medical condition (e.g., 'recovering from surgery', 'needs medication'): respiratory issues
â?? Medical record created. Pet will be assigned to foster care if needed.
Pet added: Luna
Pet Luna assigned to foster home: Happy Paws Foster
â?? Pet registered successfully and saved to pets.csv
```

```
================================================
               ADMIN MENU
================================================
1.   Add Sample Data
2.   Register New Pet
3.   Register New Foster Home
4.   List Registered Adopters
5.   List Foster Homes
6.   Process Next Adoption
7.   Manage Foster Care
8.   System Status
9.   View Adoption Queue
10.  Customer Service (view/respond tickets)
0.   Logout (return to role selection)
------------------------------------------------
Choose an option: 2

=== REGISTER NEW PET ===
Pet Type (1-Dog, 2-Cat): 1
ID: PET005
Name: Charlie
Breed: Dachshund
Age: 3
Gender (male/female): male
Size (small/medium/large): small
Energy Level (1-10): 4
Good with children? (true/false): true
Requires yard? (true/false): false
Does this pet need medical care/foster care? (yes/no): yes
Medical condition (e.g., 'recovering from surgery', 'needs medication'): needs wheelchair for back legs
â?? Medical record created. Pet will be assigned to foster care if needed.
Pet added: Charlie
Pet Charlie assigned to foster home: Happy Paws Foster
â?? Pet registered successfully and saved to pets.csv
```

5. List Foster Homes

```
==================================================
                ADMIN MENU
==================================================
1.  Add Sample Data
2.  Register New Pet
3.  Register New Foster Home
4.  List Registered Adopters
5.  List Foster Homes
6.  Process Next Adoption
7.  Manage Foster Care
8.  System Status
9.  View Adoption Queue
10. Customer Service (view/respond tickets)
0.  Logout (return to role selection)
--------------------------------------------------
Choose an option: 5

=== REGISTERED FOSTER HOMES ===
1. Happy Paws Foster | Capacity: 2/5 | Specializations: [special_needs, sick]
2. Second Chance Foster | Capacity: 0/2 | Specializations: [special_needs, elderly]
```

6. Manage Foster care - View and manage foster pets

```
==================================================
                ADMIN MENU
==================================================
1.  Add Sample Data
2.  Register New Pet
3.  Register New Foster Home
4.  List Registered Adopters
5.  List Foster Homes
6.  Process Next Adoption
7.  Manage Foster Care
8.  System Status
9.  View Adoption Queue
10. Customer Service (view/respond tickets)
0.  Logout (return to role selection)
--------------------------------------------------
Choose an option: 7

=== MANAGE FOSTER CARE ===
1. List Pets in Foster Care
2. Un-foster Pet (Return to Available Pets)
Choose an option: 1

=== PETS IN FOSTER CARE ===
1. Luna | Foster Home: Happy Paws Foster | Condition: Sick: respiratory issues
2. Charlie | Foster Home: Happy Paws Foster | Condition: Sick: needs wheelchair for back legs
```

```
==================================================
                  ADMIN MENU
==================================================
1.   Add Sample Data
2.   Register New Pet
3.   Register New Foster Home
4.   List Registered Adopters
5.   List Foster Homes
6.   Process Next Adoption
7.   Manage Foster Care
8.   System Status
9.   View Adoption Queue
10.  Customer Service (view/respond tickets)
0.   Logout (return to role selection)
--------------------------------------------------
Choose an option: 7

=== MANAGE FOSTER CARE ===
1. List Pets in Foster Care
2. Un-foster Pet (Return to Available Pets)
Choose an option: 2

=== UN-FOSTER PET ===

=== PETS IN FOSTER CARE ===
1. Luna | Foster Home: Happy Paws Foster | Condition: Sick: respiratory issues
2. Charlie | Foster Home: Happy Paws Foster | Condition: Sick: needs wheelchair for back legs
Enter Pet ID to un-foster: PET004
â?? Pet Luna has been removed from foster care and is now available for adoption.
â?? Foster home Happy Paws Foster now has 1/5 occupancy.
```

7. View system status

```
===================================================
                ADMIN MENU
===================================================
1.   Add Sample Data
2.   Register New Pet
3.   Register New Foster Home
4.   List Registered Adopters
5.   List Foster Homes
6.   Process Next Adoption
7.   Manage Foster Care
8.   System Status
9.   View Adoption Queue
10.  Customer Service (view/respond tickets)
0.   Logout (return to role selection)
---------------------------------------------------
Choose an option: 8

=== SYSTEM STATUS ===
Total Pets: 5
Available Pets: 4
Pets in Foster Care: 1
Adopted Pets: 0
Pets Needing Foster Care: 2
Registered Adopters: 2
Foster Homes: 2
Pending Applications: 0
```

8. Logout of Admin

```
============================================================
                  ADMIN MENU
============================================================
1.   Add Sample Data
2.   Register New Pet
3.   Register New Foster Home
4.   List Registered Adopters
5.   List Foster Homes
6.   Process Next Adoption
7.   Manage Foster Care
8.   System Status
9.   View Adoption Queue
10.  Customer Service (view/respond tickets)
0.   Logout (return to role selection)
------------------------------------------------------------
Choose an option: 0
Do you want to quit the entire application? (yes/no): no


============================================================
Role Selection
============================================================
1. Admin
2. User
Type 'exit' or 'q' to quit.
Enter choice (1/2): 2
```

9. Register new Adopters

```
====================================================
                USER MENU
====================================================
1.   Register as Adopter
2.   Login as Adopter
3.   List Available Pets
4.   Submit Adoption Application
5.   Check Compatibility Analysis
6.   Raise Ticket (Customer Service)
7.   Return Adopted Pet
0.   Logout (return to role selection)
----------------------------------------------------
Choose an option: 1

=== REGISTER NEW ADOPTER ===
ID: ADPT003
Name: Robert Brown
Date of Birth (YYYY-MM-DD): 1988-07-12
Contact Info: 9087123456
Housing Type (apartment/house/condo): house
Has Children? (true/false): true
Years of Pet Experience: 6
Monthly Income: 7000.0
Lifestyle (comma separated - active,homebody,traveler): active,homebody
Password: RobertBrown03
Adopter registered: Robert Brown
â?? Adopter registered successfully and saved to adopters.csv
â?? Please login with your ID and password to access user features.
```

```
==================================================
                USER MENU
==================================================
1.   Register as Adopter
2.   Login as Adopter
3.   List Available Pets
4.   Submit Adoption Application
5.   Check Compatibility Analysis
6.   Raise Ticket (Customer Service)
7.   Return Adopted Pet
0.   Logout (return to role selection)
--------------------------------------------------
Choose an option: 1

=== REGISTER NEW ADOPTER ===
ID: ADPT004
Name: Lisa Taylor
Date of Birth (YYYY-MM-DD): 1995-03-25
Contact Info: 9871106544
Housing Type (apartment/house/condo): apartment
Has Children? (true/false): false
Years of Pet Experience: 1
Monthly Income: 4000.0
Lifestyle (comma separated - active,homebody,traveler): homebody
Password: LisaTaylor04
Adopter registered: Lisa Taylor
â?? Adopter registered successfully and saved to adopters.csv
â?? Please login with your ID and password to access user features.
```

10. Login as Adopter

```
========================================================
                    USER MENU
========================================================
1.    Register as Adopter
2.    Login as Adopter
3.    List Available Pets
4.    Submit Adoption Application
5.    Check Compatibility Analysis
6.    Raise Ticket (Customer Service)
7.    Return Adopted Pet
0.    Logout (return to role selection)
--------------------------------------------------------
Choose an option: 2

=== ADOPTER LOGIN ===
Adopter ID: ADPT003
Password: RobertBrown03
â?? Login successful! Welcome, Robert Brown
```

11. Compatibility Analysis with single pet

```
====================================================
                USER MENU
====================================================
*** Logged in as: Robert Brown ***
1.   Register as Adopter
2.   Login as Adopter
3.   List Available Pets
4.   Submit Adoption Application
5.   Check Compatibility Analysis
6.   Raise Ticket (Customer Service)
7.   Return Adopted Pet
0.   Logout (return to role selection)
----------------------------------------------------
Choose an option: 5

=== COMPATIBILITY ANALYSIS ===
Adopter: Robert Brown (ADPT003)
Pet ID (or type 'ALL' for analysis with all available pets): PET001

=== COMPATIBILITY ANALYSIS ===
Overall Compatibility: 94.0%
Breakdown:
- Housing: 100.0%
- Lifestyle: 100.0%
- Experience: 100.0%
- Financial: 60.0%
- Family: 100.0%

Detailed Analysis:
- Lifestyle: Active lifestyle matches high-energy dog
- Experience: Experienced owner - can handle various pet needs
- Financial: Pet costs represent 15.0% of monthly income
- Family: Dog is good with children - family friendly

Recommendations:
>>> EXCELLENT MATCH! Strong recommendation for adoption.
    This pairing shows high compatibility across all factors.
```

12. Compatibility Analysis with ALL pets

```
====================================================
                USER MENU
====================================================
*** Logged in as: Robert Brown ***
1.  Register as Adopter
2.  Login as Adopter
3.  List Available Pets
4.  Submit Adoption Application
5.  Check Compatibility Analysis
6.  Raise Ticket (Customer Service)
7.  Return Adopted Pet
0.  Logout (return to role selection)
----------------------------------------------------
Choose an option: 5

=== COMPATIBILITY ANALYSIS ===
Adopter: Robert Brown (ADPT003)
Pet ID (or type 'ALL' for analysis with all available pets): ALL

=== COMPATIBILITY ANALYSIS FOR ALL AVAILABLE PETS ===
Adopter: Robert Brown (ADPT003)
================================================================================

1. Buddy (Golden Retriever - Dog) | Overall Compatibility: 94.0%
   *** EXCELLENT MATCH - Strongly recommended! ***

   DETAILED ANALYSIS:
   Overall Compatibility: 94.0%
   Breakdown:
   - Housing: 100.0%
   - Lifestyle: 100.0%
   - Experience: 100.0%
   - Financial: 60.0%
   - Family: 100.0%
   Detailed Analysis:
   - Lifestyle: Active lifestyle matches high-energy dog
   - Experience: Experienced owner - can handle various pet needs
   - Financial: Pet costs represent 15.0% of monthly income
   - Family: Dog is good with children - family friendly
```

```
   - Family: Dog is good with children - family friendly
   Recommendations:
   >>> EXCELLENT MATCH! Strong recommendation for adoption.
       This pairing shows high compatibility across all factors.


-------------------------------------------------------------------------------

2. Rocky (German Shepherd - Dog) | Overall Compatibility: 94.0%
   *** EXCELLENT MATCH - Strongly recommended! ***

   DETAILED ANALYSIS:
   Overall Compatibility: 94.0%
   Breakdown:
   - Housing: 100.0%
   - Lifestyle: 100.0%
   - Experience: 100.0%
   - Financial: 60.0%
   - Family: 100.0%
   Detailed Analysis:
   - Lifestyle: Active lifestyle matches high-energy dog
   - Experience: Experienced owner - can handle various pet needs
   - Financial: Pet costs represent 15.0% of monthly income
   - Family: Dog is good with children - family friendly
   Recommendations:
   >>> EXCELLENT MATCH! Strong recommendation for adoption.
       This pairing shows high compatibility across all factors.


-------------------------------------------------------------------------------

3. Whiskers (Siamese - Cat) | Overall Compatibility: 93.0%
   *** EXCELLENT MATCH - Strongly recommended! ***

   DETAILED ANALYSIS:
   Overall Compatibility: 93.0%
   Breakdown:
   - Housing: 100.0%
   - Lifestyle: 100.0%
   - Experience: 80.0%
   - Financial: 100.0%
```

```
        - Family: 80.0%
        >>> PERFECT MATCH! All criteria exceed 80%
        Detailed Analysis:
        - Housing: Indoor cat suitable for any housing
        - Experience: Experienced owner - can handle various pet needs
        - Financial: Pet costs represent 4.3% of monthly income
        - Family: Cat should be fine with children
        Recommendations:
        >>> EXCELLENT MATCH! Strong recommendation for adoption.
            This pairing shows high compatibility across all factors.


-------------------------------------------------------------------------------


4. Luna (Siamese - Cat) | Overall Compatibility: 78.5%
    ** GOOD MATCH - Suitable for adoption **

    DETAILED ANALYSIS:
    Overall Compatibility: 78.5%
    Breakdown:
    - Housing: 100.0%
    - Lifestyle: 60.0%
    - Experience: 80.0%
    - Financial: 100.0%
    - Family: 50.0%
    Detailed Analysis:
    - Housing: Indoor cat suitable for any housing
    - Experience: Experienced owner - can handle various pet needs
    - Financial: Pet costs represent 4.3% of monthly income
    - Family: Shy cat may need quiet environment without children
    Recommendations:
    >>> GOOD MATCH. Consider adoption with proper preparation.
        Some areas may need attention but overall good potential.


-------------------------------------------------------------------------------


*** TOP RECOMMENDATION ***
    Buddy - 94.0% compatibility
    Type: Dog | Breed: Golden Retriever
    EXCELLENT MATCH
```

13. Submit valid adoption application

```
====================================================
                USER MENU
====================================================
*** Logged in as: Robert Brown ***
1.   Register as Adopter
2.   Login as Adopter
3.   List Available Pets
4.   Submit Adoption Application
5.   Check Compatibility Analysis
6.   Raise Ticket (Customer Service)
7.   Return Adopted Pet
0.   Logout (return to role selection)
----------------------------------------------------
Choose an option: 4

=== SUBMIT ADOPTION APPLICATION ===
Adopter: Robert Brown (ADPT003)
Pet ID: PET001
Adoption application submitted successfully!
Compatibility Score: 94.0%
```

14. Submit duplicate Adoption application

```
====================================================
                USER MENU
====================================================
*** Logged in as: Robert Brown ***
1.   Register as Adopter
2.   Login as Adopter
3.   List Available Pets
4.   Submit Adoption Application
5.   Check Compatibility Analysis
6.   Raise Ticket (Customer Service)
7.   Return Adopted Pet
0.   Logout (return to role selection)
----------------------------------------------------
Choose an option: 4

=== SUBMIT ADOPTION APPLICATION ===
Adopter: Robert Brown (ADPT003)
Pet ID: PET001
Error submitting application: Application already exists for this adopter and pet
```

15. Submit multiple applications for the same pet

```
=================================================
                USER MENU
=================================================
*** Logged in as: Lisa Taylor ***
1.   Register as Adopter
2.   Login as Adopter
3.   List Available Pets
4.   Submit Adoption Application
5.   Check Compatibility Analysis
6.   Raise Ticket (Customer Service)
7.   Return Adopted Pet
0.   Logout (return to role selection)
-------------------------------------------------
Choose an option: 4

=== SUBMIT ADOPTION APPLICATION ===
Adopter: Lisa Taylor (ADPT004)
Pet ID: PET001
Error submitting application: This pet already has a pending adoption application. Please choose another pet.
```

16. Submit adoption application (that will get rejected)

```
========================================================
                    USER MENU
========================================================
*** Logged in as: Lisa Taylor ***
1.   Register as Adopter
2.   Login as Adopter
3.   List Available Pets
4.   Submit Adoption Application
5.   Check Compatibility Analysis
6.   Raise Ticket (Customer Service)
7.   Return Adopted Pet
0.   Logout (return to role selection)
--------------------------------------------------------
Choose an option: 4

=== SUBMIT ADOPTION APPLICATION ===
Adopter: Lisa Taylor (ADPT004)
Pet ID: PET003
Adoption application submitted successfully!
Compatibility Score: 53.49999999999999%
```

17. View application queue

```
========================================================
                   ADMIN MENU
========================================================
1.   Add Sample Data
2.   Register New Pet
3.   Register New Foster Home
4.   List Registered Adopters
5.   List Foster Homes
6.   Process Next Adoption
7.   Manage Foster Care
8.   System Status
9.   View Adoption Queue
10.  Customer Service (view/respond tickets)
0.   Logout (return to role selection)
--------------------------------------------------------
Choose an option: 9

=== ADOPTION APPLICATIONS QUEUE ===
Applications are processed by highest compatibility score first.
--------------------------------------------------------
1. Robert Brown -> Buddy | Score: 94.0% | Status: PENDING
2. Lisa Taylor -> Rocky | Score: 53.5% | Status: PENDING
```

18. Process Adoption Applications

```
====================================================
                ADMIN MENU
====================================================
1.   Add Sample Data
2.   Register New Pet
3.   Register New Foster Home
4.   List Registered Adopters
5.   List Foster Homes
6.   Process Next Adoption
7.   Manage Foster Care
8.   System Status
9.   View Adoption Queue
10.  Customer Service (view/respond tickets)
0.   Logout (return to role selection)
----------------------------------------------------
Choose an option: 6

=== PROCESS ADOPTION ===
Applications are processed by highest compatibility score first.
ADOPTION APPROVED for: Robert Brown
Pet: Buddy
Compatibility Score: 94.0%
```

```
====================================================
                ADMIN MENU
====================================================
1.   Add Sample Data
2.   Register New Pet
3.   Register New Foster Home
4.   List Registered Adopters
5.   List Foster Homes
6.   Process Next Adoption
7.   Manage Foster Care
8.   System Status
9.   View Adoption Queue
10.  Customer Service (view/respond tickets)
0.   Logout (return to role selection)
----------------------------------------------------
Choose an option: 6

=== PROCESS ADOPTION ===
Applications are processed by highest compatibility score first.
ADOPTION REJECTED for: Lisa Taylor
Reason: Low compatibility score (53.49999999999999%)
```

19. View/Respond to tickets raised by customers

```
==================================================
                 ADMIN MENU
==================================================
1.   Add Sample Data
2.   Register New Pet
3.   Register New Foster Home
4.   List Registered Adopters
5.   List Foster Homes
6.   Process Next Adoption
7.   Manage Foster Care
8.   System Status
9.   View Adoption Queue
10.  Customer Service (view/respond tickets)
0.   Logout (return to role selection)
--------------------------------------------------
Choose an option: 10

=== CUSTOMER SERVICE (ADMIN) ===
1. View all tickets
2. Respond to a ticket
3. Back to Admin Menu
Choose: 1

--- Support Tickets ---
Ticket #1 | Adopter: ADPT003 | Issue: How long will it take to process applications? | Response: N/A | Status: OPEN
```

```
=== CUSTOMER SERVICE (ADMIN) ===
1. View all tickets
2. Respond to a ticket
3. Back to Admin Menu
Choose: 2
Enter Ticket ID: 1
Enter Response: 3-5 business days!
Error saving tickets: pet_adoption\tickets.csv (The system cannot find the path specified)
[CustomerSupport] Responded to ticket #1

=== CUSTOMER SERVICE (ADMIN) ===
1. View all tickets
2. Respond to a ticket
3. Back to Admin Menu
Choose: 1

--- Support Tickets ---
Ticket #1 | Adopter: ADPT003 | Issue: How long will it take to process applications? | Response: 3-5 business days! | Status: RESOLVED

=== CUSTOMER SERVICE (ADMIN) ===
1. View all tickets
2. Respond to a ticket
3. Back to Admin Menu
Choose: 3
```

20. Return adopted pet

```
============================================================
                    USER MENU
============================================================
*** Logged in as: John Doe ***
1.   Register as Adopter
2.   Login as Adopter
3.   List Available Pets
4.   Submit Adoption Application
5.   Check Compatibility Analysis
6.   Raise Ticket (Customer Service)
7.   Return Adopted Pet
0.   Logout (return to role selection)
------------------------------------------------------------
Choose an option: 7

=== RETURN ADOPTED PET ===
Enter Pet ID to return: PET001
Reason for return: allergies in family
â?? Pet Buddy has been returned to the shelter.
â?? Reason: allergies in family
â?? Pet is now available for adoption again.
```

21. Exit the system

```
===================================================
                USER MENU
===================================================
*** Logged in as: John Doe ***
1.   Register as Adopter
2.   Login as Adopter
3.   List Available Pets
4.   Submit Adoption Application
5.   Check Compatibility Analysis
6.   Raise Ticket (Customer Service)
7.   Return Adopted Pet
0.   Logout (return to role selection)
---------------------------------------------------
Choose an option: 0
Do you want to quit the entire application? (yes/no): yes
System data saved successfully!
Thank you for using Pet Adoption System!
All data has been saved to CSV files.

F:\pet_adoption>
```