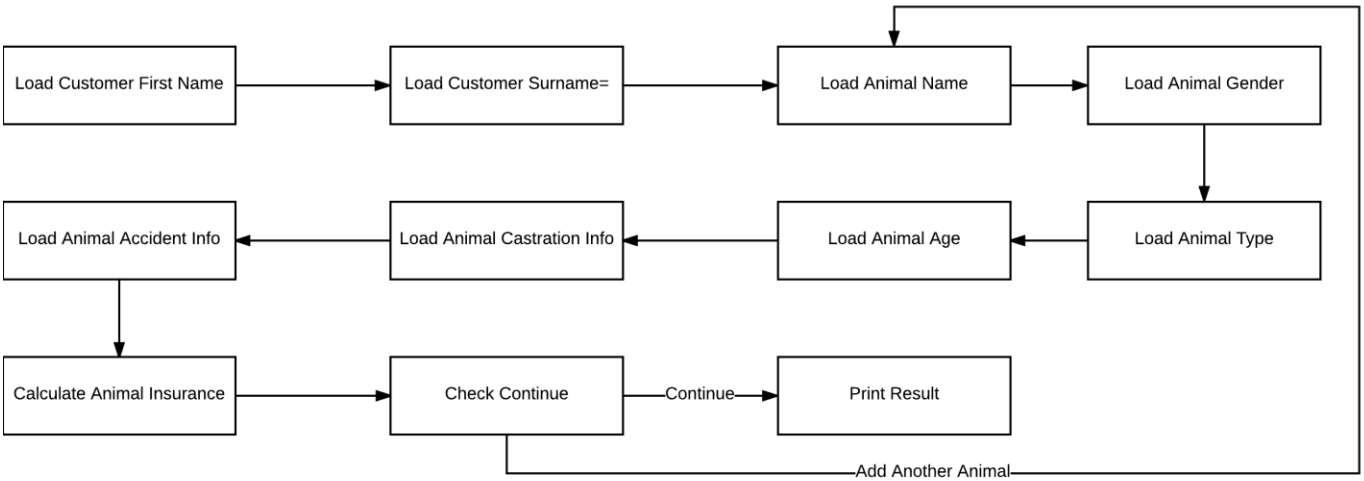
Table of Contents

Diagrams

JSP



Data Dictionary

Global

Load Pos.	Name	Type	Default	Purpose
1	curr_state	int	0	Number identifying the current state of program
2	owner_first_name	char array[20]	\0	The pet owner first name
3	owner_surname	char array[20]	\0	The pet owner surname
4	pet_names	char array[10][20]	\0	The pets names
5	pet_gender	int array[10]	-1	The pets genders
6	pet_type	char array[10]	U	The pets types encoded as single characters
7	pet_type_price	float array[5]	50, 80, 40, 60, 10	The pets insurance prices
8	pet_age	int char[10]	-1	The pets ages
9	pet_is_neutered	int char[10]	-1	The pets castration data
10	pet_had_accident	int char[10]	-1	The pets accident data
11	insurance_cost	float char[10]	0	The array of insurance total costs
12	insurance_base_price	float char[10]	0	The array of insurance base prices
13	insurance_mod_old	float char[10]	0	The arrays of insurance modifiers
14	insurance_mod_young_male	float char[10]	0	
15	insurance_mod_accident	float char[10]	0	
16	quote	float	0	The final insurance quote
17	idx_curr_pet	int	0	The current index of processed pet
18	tmp	char array[20]	\0	Any temporary variable that needs to be stored

Local

Load Pos.	Name	Type	Default	Purpose
1	i	int	\0	Used exclusively within iterative for loops

Pseudocode

Load Customer First Name

```
Print “Customer First Name:”
Scan first_name
IF first_name IS ?
    Print help
ELSE
nextState
```

Load Customer Surname

```
Print “Customer Surname:”
Scan surname
IF surname IS ?
    Print help
ELSE
nextState
```

Load Animal Name

```
Print “Animal Name:”
Scan animal_name
IF animal_name IS ?
    Print help
ELSE
nextState
```

Load Animal Gender

```
Print “Animal Gender:”
Scan animal_gender
IF animal_gender IS ?
    Print help
ELSE
nextState
```

Load Animal Type

```
Print “Animal Type:”
Scan animal_type
IF animal_type IS ?
    Print help
ELSE
nextState
```

Load Animal Age

```
Print “Animal Age:”
Scan animal_age
IF animal_age IS ?
    Print help
ELSE
nextState
```

Load Animal Castration Info

```
Print “Animal Castration Status:”
Scan animal_castration
IF animal_castration IS ?
    Print help
ELSE
nextState
```

Load Animal Accident Info

```
Print “Animal Accident Status:”
Scan animal_accident
IF animal_accident IS ?
{
    Print help
}
ELSE
{
nextState
}
```

Calculate Animal Insurance

```
Switch animal_type {
    Case Dog
        IF animal_castration IS 1
        {
            cost = pet_price[0]
        }
        ELSE
        {
```

```
            cost = pet_price[1]
        }
    Case Cat
        IF animal_castration IS 1
        {
            cost = pet_price[3]
        }
        ELSE
        {
            cost = pet_price[4]
        }
    Case Other
        cost = pet_price[5]
}
IF animal_age IS GREATER THAN 5
{
    cost = mod_old -> cost
}
ELSE IF animal_age IS LESS THAN 2 AND animal_gender IS male
{
    cost = mod_young_male -> cost
}
IF animal_accident IS true
{
    cost = mod_accident -> cost
}
nextState
```

Check Continue

```
Print “Add Another Animal?”
Scan choice
IF choice IS yes
    State0 //Add an animal
ELSE
nextState
```

Print Result

```
for ;count IS LESS THAN total_pets;
{
    Print animal_name
    Print cost
    Print insurance_mods
}
Print total
nextState //Ends Program
```

Finite-State Machine

```
While state IS NOT 11
{
    Switch curr_state
    {        case 0:
        load_customer_first_name()
    case 1
        load_customer_surname()
    Case 2
        load_animal_name()
    Case 3
        load_animal_gender()
    Case 4
        load_animal_type()
    Case 5
        load_animal_age()
    Case 6
        load_animal_castration_info()
    Case 7
        load_animal_accident_info()
    Case 8
        calculate_animal_insurance()
    Case 9
        check_continue()
    Case 10
        print_result()
    }
}
```