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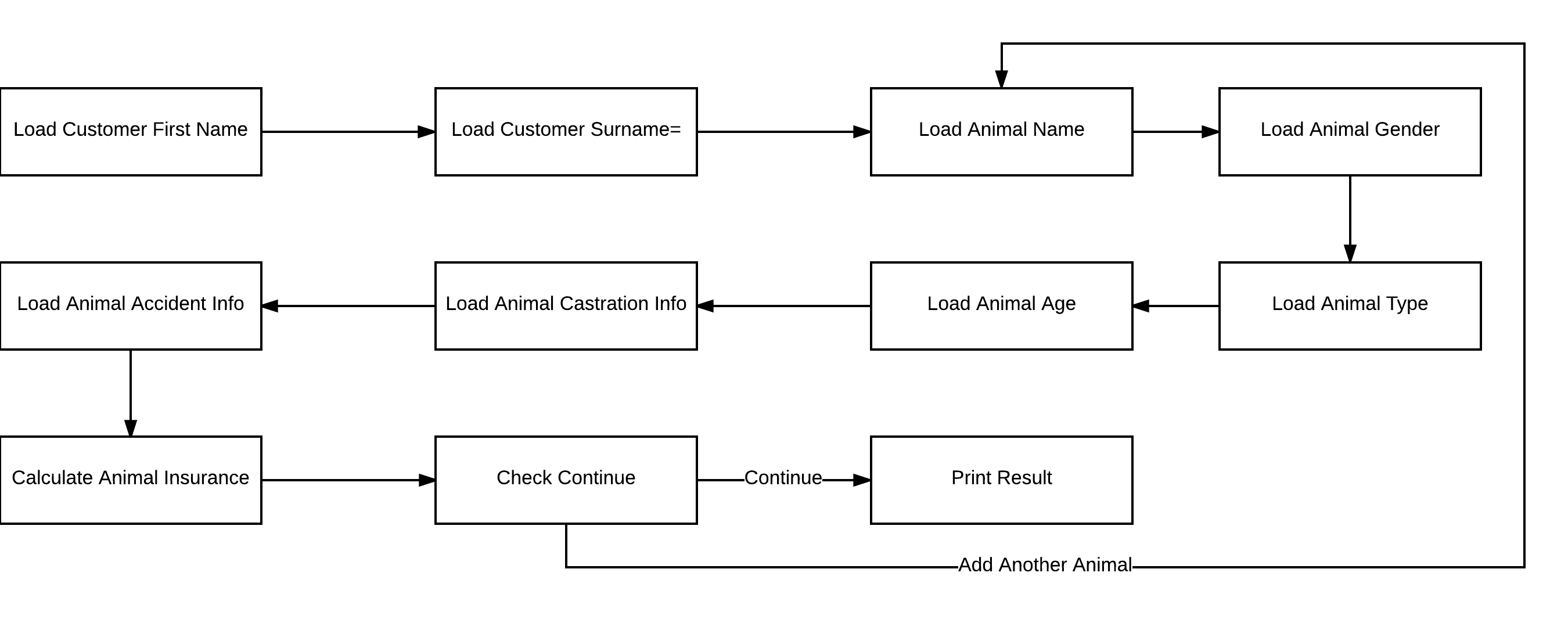
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# Diagrams

## 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\_name -> 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()  }  } |