4-3 Project One

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INPUT petType, either dog or cat

SET petType to either dog or cat from input

IF petType is dog THEN

IF dogSpaces less than 30 THEN

INPUT petName

SET petName

IF newPet THEN

INPUT petAge

SET petAge

INPUT petWeight

SET petWeight

ELSE

OUTPUT petAge and petWeight

INPUT “Is information correct?”

IF incorrect THEN

INPUT petAge

SET petAge

INPUT petWeight

SET petWeight

ELSE

CONTINUE with current petAge and petWeight

ENDIF

ENDIF

INPUT lengthOfStay

SET lengthOfStay

IF lengthOfStay greater than or equal to 2 THEN

INPUT “Does owner want pet to be groomed?”

SET grooming to either yes or no from input

ELSE

OUTPUT “Grooming not offered”

ENDIF

ASSIGN pet to space

ELSE

OUTPUT dog spaces full, no room to board

ENDIF

ELSE

IF cat spaces less than 12 THEN

INPUT petName

SET petName

IF newPet THEN

INPUT petAge

SET petAge

ELSE

CONTINUE with current petAge

ENDIF

INPUT lengthOfStay

SET lengthOfStay

ASSIGN cat to space

ELSE

OUTPUT catSpaces full, no room to board

ENDIF

END

A diagram of a flowchart

Description automatically generated

Encapsulation, abstraction, inheritance, and polymorphism are implemented to the development for Pet BAG. The three objects (Pet, Dog, Cat), through encapsulation and abstraction, privately store attributes of a unique class; which can identify the class, however cannot alter. Dog and Cat, or child classes, are acquired from Pet, or parent class. Administering inheritance and polymorphism to broaden the parent class (Pet) to the child class (Dog, Cat), the child classes are made distinct using required logic while using familiar logic of the parent class. Object-oriented programming assists in establishing user to Java interpretation and communication, making coding easier for programmers in app development.