**Pet System**

In this code I have made a parent abstract class name PET, which have three protected members as:

1. String Name
2. String Sound
3. String Food

Also, this class has three virtual functions, named as:

1. Pure Virtual void getname()
2. Pure Virtual void getsound()
3. Pure Virtual void getfood()

The Pet class is parent and it is inherited by many static child classes as follow:

* Dog
* Elephant
* Lion
* Goldfish
* Cat
* Parrot
* Horse

All these class inherit protected members of parent class i-e Pet. Here, I use polymorphism as all these classes inherits pure virtual functions of parent class.

Also I have maintain an array of foods. When user buys a pet, this code will also display food of that pet.

For Exception handling, I have implemented three classes

* PetNotCompatibleException
* NoMoreFoodException
* InedibleFoodException

Their base class is Exception which I used C++ library for it.

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| **Pet** |
| Name(string)  Food(string)  Sound(string) |
| Pure virtual getname()  Pure vitual getsound()  Pure virtual getfood() |

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| **Dog** |
| Name(string)  Food(string)  Sound(string) |
| Pure virtual getname()  Pure vitual getsound()  Pure virtual getfood() |

|  |
| --- |
| **Lion** |
| Name(string)  Food(string)  Sound(string) |
| Pure virtual getname()  Pure vitual getsound()  Pure virtual getfood() |

|  |
| --- |
| **Cat** |
| Name(string)  Food(string)  Sound(string) |
| Pure virtual getname()  Pure vitual getsound()  Pure virtual getfood() |

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| **Horse** |
| Name(string)  Food(string)  Sound(string) |
| Pure virtual getname()  Pure vitual getsound()  Pure virtual getfood() |

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| **Goldfish** |
| Name(string)  Food(string)  Sound(string) |
| Pure virtual getname()  Pure vitual getsound()  Pure virtual getfood() |

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| **parrot** |
| Name(string)  Food(string)  Sound(string) |
| Pure virtual getname()  Pure vitual getsound()  Pure virtual getfood() |

|  |
| --- |
| **Elephant** |
| Name(string)  Food(string)  Sound(string) |
| Pure virtual getname()  Pure vitual getsound()  Pure virtual getfood() |

**Exception**

**InedibleFoodException**

what()

**PetNotCompatibleException**

what()

**NoMoreFoodException**

what()