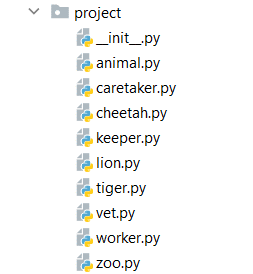
## Wild Cat Zoo

Create separate file for each class as shown below and submit a zip file containing all files (zip the whole project folder/module) - it is important to include all files in project module to be able to make proper imports.



The **Animal** class is a **base class** for any type of animal in the zoo. It should receive **four public attributes** - a **name** (string), a **gender** (str), an **age** (int) and a **money\_for\_care** (int) upon initialization.

The **Animal** class should also have **1 additional method**:

* **\_\_repr\_\_()** - returns string representation of the animal in the format: **"Name: {name}, Age: {age}, Gender: {gender}"**

The **Lion**, the **Tiger** and the **Cheetah** classes should **inherit** from the **Animal** class. Each of these animals costs a certain **amount of money to be cared for**:

* A lion needs **50**
* A tiger needs **45**
* A cheetah needs **60**

The **Worker** class is a **base class** for any type of employee in the zoo. It should receive three public attributes - a **name** (string), an **age** (int) and a **salary** (int) upon initialization.

The **Worker** class should also have **one method**:

* **\_\_repr\_\_()** - returns string representation of the workers in the format: **"Name: {name}, Age: {age}, Salary: {salary}"**

The **Keeper**, the **Caretaker** and the **Vet** classes should **inherit** from the **Worker** class.

The **Zoo** class should receive 4 attributes upon initialization:

* Public attribute **name: string**
* **Private** attribute **budget: int**
* **Private** attribute **animal\_capacity: int**
* **Private** attribute **workers\_capacity: int**

It should also have 2 instance attributes:

* Public attribute **animals: list** -(empty upon initialization)
* Public attribute **workers: list** - (empty upon initialization)

The **Zoo** class should have also **7 methods**:

* **add\_animal(animal, price)**
* If you have **enough budget** and **capacity** **add** the animal (instance of Lion/Tiger/Cheetah) to the **animals list**, **reduce** the **budget** and **return** **"{name} the {type of animal (Lion/Tiger/Cheetah)} added to the zoo"**
* If you have capacity, but **no budget**, return **"Not enough budget"**
* In any other case, you **do not have space** and you should return **"Not enough space for animal"**
* **hire\_worker(worker)**
* If you have **not exceeded** the capacity of workers in the zoofor the worker (instance of Keeper/Caretaker/Vet), **add him** to the workers and return **"{name} the {type(Keeper/Vet/Caretaker)} hired successfully"**
* Otherwise return **"Not enough space for worker"**
* **fire\_worker(worker\_name)**
* If there **is a worker** with that name in the workers list, **remove** him and return **"{worker\_name} fired successfully"**
* Otherwise return **"There is no {worker\_name} in the zoo"**
* **pay\_workers()**
* If you have **enough budget** to pay the workers (sum their salaries) **pay them** and return **"You payed your workers. They are happy. Budget left: {left\_budget}"**
* Otherwise return **"You have no budget to pay your workers. They are unhappy"**
* **tend\_animals()**
* If you have **enough budget** to take care for the animals **reduce the budget** and return **"You tended all the animals. They are happy. Budget left: {left\_budget}"**
* Otherwise return **"You have no budget to tend the animals. They are unhappy."**
* **profit(amount)**
* **Increase the budget** with the given amount of profit
* **animals\_status()**
* Returns the following string:

**You have {total\_animals\_count} animals****----- {amount\_of\_lions} Lions:  
{lion1}  
…  
----- {amount\_of\_tigers} Tigers:  
{tiger1}  
…  
----- {amount\_of\_cheetahs} Cheetahs:  
{cheetah1}  
…**

* ***Hint***: use the **\_\_repr\_\_** methods of the animals to print them on the console

**workers\_status()**

* Returns the following string:

**You have {total\_workers\_count} workers  
----- {amount\_of\_keepers} Keepers:  
{keeper1}  
…  
----- {amount\_of\_caretakers} Caretakers:  
{caretaker1}  
…  
----- {amount\_of\_vetes} Vets:  
{vet1}  
…**

* ***Hint***: use the **\_\_repr\_\_** methods of the workers to print them on the console

### Examples

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| **Test Code** |
| from project.caretaker import Caretaker  from project.cheetah import Cheetah  from project.keeper import Keeper  from project.lion import Lion  from project.tiger import Tiger  from project.vet import Vet  from project.zoo import Zoo  zoo = Zoo("Zootopia", 3000, 5, 8)  # Animals creation  animals = [Cheetah("Cheeto", "Male", 2), Cheetah("Cheetia", "Female", 1), Lion("Simba", "Male", 4), Tiger("Zuba", "Male", 3), Tiger("Tigeria", "Female", 1), Lion("Nala", "Female", 4)]  # Animal prices  prices = [200, 190, 204, 156, 211, 140]  # Workers creation  workers = [Keeper("John", 26, 100), Keeper("Adam", 29, 80), Keeper("Anna", 31, 95), Caretaker("Bill", 21, 68), Caretaker("Marie", 32, 105), Caretaker("Stacy", 35, 140), Vet("Peter", 40, 300), Vet("Kasey", 37, 280), Vet("Sam", 29, 220)]  # Adding all animals  for i in range(len(animals)):  animal = animals[i]  price = prices[i]  print(zoo.add\_animal(animal, price))  # Adding all workers  for worker in workers:  print(zoo.hire\_worker(worker))  # Tending animals  print(zoo.tend\_animals())  # Paying keepers  print(zoo.pay\_workers())  # Fireing worker  print(zoo.fire\_worker("Adam"))  # Printing statuses  print(zoo.animals\_status())  print(zoo.workers\_status()) |
| **Output** |
| Cheeto the Cheetah added to the zoo  Cheetia the Cheetah added to the zoo  Simba the Lion added to the zoo  Zuba the Tiger added to the zoo  Tigeria the Tiger added to the zoo  Not enough space for animal  John the Keeper hired successfully  Adam the Keeper hired successfully  Anna the Keeper hired successfully  Bill the Caretaker hired successfully  Marie the Caretaker hired successfully  Stacy the Caretaker hired successfully  Peter the Vet hired successfully  Kasey the Vet hired successfully  Not enough space for worker  You tended all the animals. They are happy. Budget left: 1779  You payed your workers. They are happy. Budget left: 611  Adam fired successfully  You have 5 animals  ----- 1 Lions:  Name: Simba, Age: 4, Gender: Male  ----- 2 Tigers:  Name: Zuba, Age: 3, Gender: Male  Name: Tigeria, Age: 1, Gender: Female  ----- 2 Cheetahs:  Name: Cheeto, Age: 2, Gender: Male  Name: Cheetia, Age: 1, Gender: Female  You have 7 workers  ----- 2 Keepers:  Name: John, Age: 26, Salary: 100  Name: Anna, Age: 31, Salary: 95  ----- 3 Caretakers:  Name: Bill, Age: 21, Salary: 68  Name: Marie, Age: 32, Salary: 105  Name: Stacy, Age: 35, Salary: 140  ----- 2 Vets:  Name: Peter, Age: 40, Salary: 300  Name: Kasey, Age: 37, Salary: 280 |