Chapter 11 Creature

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Instructions

Using the class Creature for the parent class, create a sub-class of Creature called **Orc**. Orc should have attributes for weapon (string), max\_hit\_points (integer), and current\_hit\_points (integer). Create appropriate setter and getter methods and an appropriate \_\_str\_\_() method. (Remember, \_\_str\_\_() should return a string value.) For all Orcs, the friendly attribute should be set to False and the type\_of\_creature should be "Orc".

Then, using the class Orc for the parent class, create a sub-class of Orc called OrcBoss. OrcBoss should include attributes for name (string) and a special\_move (string). Create appropriate setter and getter methods and an appropriate \_\_str\_\_() method.

You will then create a simple program that creates an instance of each of the three classes and uses the \_\_str\_\_() method to display them.

Classes

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| --- |
| Creature |
| - type\_of\_creature: String  - friendly: Boolean  - position: (x: int, y: Int, z: Int)  - image: String |
| - \_\_init\_\_(friendly, position, image)  + set\_type\_of\_cerature(type\_of\_creature)  + set\_friendly(friendly)  + set\_position(position)  + set\_image(image)  + get\_type\_of\_creature()  + get\_friendly()  + get\_position()  + get\_image() |

|  |
| --- |
| Orc: Creature |
| - weapon  - max\_hit\_points  - current\_hit\_points |
| - \_\_init\_\_(weapon, max\_hit\_points, \_current\_hit\_points, …))  - \_\_str\_\_()  + set\_weapon(weapon)  + set\_max\_hit\_points(max\_hit\_points)  + set\_current\_hit\_points(current\_hit\_points)  + get\_weapon  + get\_max\_hit\_points  + get\_max\_hit\_points |

|  |
| --- |
| OrcBoss: Orc |
| - name: String  - special\_move: String |
| - \_\_init\_\_(name, special\_move, …)  - \_\_str\_\_()  + set\_name(name)  + set\_special\_move(special\_move)  + get\_name  + get\_special\_move |

Data:

Classes

- Creature

- Orc: Child of Creature

- OrcBoss: Child of Orc

Variables:

- rabbit: Creature

- orc: Orc

- griksnak: OrcBoss

Processing:

1. Create rabbit, orc, griksnak from the classes Creature, Orc, and OrcBoss respectively.
2. Print rabbit, orc, griksnak to get their \_\_str\_\_ printout

Output:

1. For Creatures, the printout will include their type, friendly status, location, and image.
2. For Orcs, their printout will include additional information weapon and HP as well as all the information from Creature.
3. For OrcBoss, their printout will include their name and special move, as well as all the information from Orc and Creature.