

```

1. public String fixCase(String s) {
    if (s.length() == 0) return s;
    if (s.charAt(0) == 'a')
        return s.toLowerCase();
    if (s.charAt(0) == 'A')
        return s.toUpperCase();
    if (s.charAt(0) == ' ') {
        int k = s.indexOf('\n');
        if (k == -1) return s;
        return s.substring(0, k) +
            s.substring(k);
    }
    return s;
}

```

3a. getAge, getName, setName, setAge, toString.

3b. toString.

3c. y = (Lion) x;

3d. x.toString() is legal. It calls the overriding method in folder x --the method in the Lion partition of the folder.

3e. x.noise() is not legal, since noise is not declared in Animal.

3f. "Narashimhan, 1008, roar!"

4.

// An instance is a horse, with a number of horns

```

public class Horse extends Animal {
    // Number of horns this horse has
    private int horns = 0;

    // = number of horns on this horse
    public int getHorns() { return horns; }

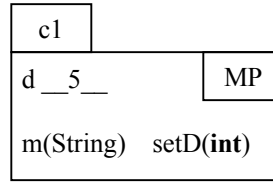
    // Set the number of horns to n
    public void setHorns(int n) { horns = n; }

    // = noise this horse makes
    public String noise() {
        return "whinny";
    }

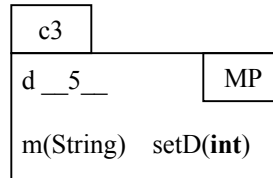
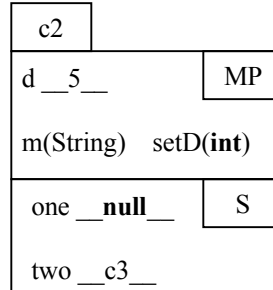
    // = description of this animal
    public String toString() {
        return super.toString() + ", " + n
            + " horns";
    }
}

```

2a.



2b.



5a. Parameter: a variable that is declared within the parentheses of a method header.

5b. Argument: an expression that appears within the parentheses of a method call.

5c. <variable> = <expression>. Evaluate the <expression> and store its value in the <variable>.

5d. Local variable: a variable declared in a method body. Its scope is the sequence of statements that follow the declaration, until the end of the block.

5e. return <expression>