

Student
-name: String - birthYear: int - age: int - gender: String
+Student(nameIn: String, birthYear: int, genderIn: String) +Student() +setName(newName: String) void +setBirthYear(newYear:int) void +setAge(newAge: int) void +setGender(newGender:String) void +getName():String +getBirthYear(): int +computeAge():int +getAge():int +getGender():String +toString():String

```
*Student.java
6 public class Student {
7     private String name;
8     private int birthYear;
9     private int age;
10    private String gender;
11    public Student()
12    {
13        name = null;
14        birthYear = 0;
15        gender = null;
16    }
17    public Student(String nameIn, int birthYearIn, String genderIn)
18    {
19        name = nameIn;
20        birthYear = birthYearIn;
21        gender = genderIn;
22    }
23    public void setName(String newName)
24    {
25        name = newName;
26    }
27    public void setBirthYear(int newYear)
28    {
29        birthYear = newYear;
30    }
31    public void setAge(int newAge)
32    {
33        age = newAge;
34    }
35    public void setGender(String newGender)
36    {
37        gender = newGender;
38    }
39    public String getName()
40    {
41        return name;
42    }
43    public int getBirthYear()
44    {
45        return birthYear;
46    }
47    public int computeAge()
48    {
49        int currentYear = 2014;
50        int age = currentYear - birthYear;
51        return age;
52    }
53    public int getAge()
54    {return age;}
55    }
56    public String getGender()
57    {return gender;}
58    }
59    public String toString()
60    {return "Name: "+name+"\nAge: "+computeAge()+"\nGender: "+gender;}
61    }
--
```

```
*Student.java  StudentsNames.java
1  //-----
2  // Author: Shyaan Khan    Period: 4    Date:
3  // Description:
4  //-----
5
6  public class StudentsNames {
7      public static void main(String[] args)
8      {
9          Student s1 = new Student("Shyaan Khan", 1997, "Male");
10         Student s2 = new Student("Cheyenne Kahn", 1999, "Female");
11         Student s3 = new Student();
12
13         System.out.println(s1);
14         System.out.println();
15         System.out.println(s2);
16
17         s2.setName("Bill");
18         s2.setBirthYear(1994);
19         s2.setGender("Male");
20         System.out.println();
21         System.out.println(s2);
22         System.out.println();
23         System.out.println(s3);
24     }
25 }
26
```

Console

<terminated> StudentsNames [Java Application] C:\Program Files\Java\jre7\bin\javaw.exe (Oct 30, 2014, 12:18:16 PM)

Age: 17
Gender: Male

Name: Cheyenne Kahn
Age: 15
Gender: Female

Name: Bill
Age: 20
Gender: Male

Name: null
Age: 2014
Gender: null

WaterBottle
<ul style="list-style-type: none">-hasWaterBottle: boolean- color: String- brand: String
<ul style="list-style-type: none">+WaterBottle(hasWaterBottleIn: Boolean, colorIn:String, brandIn: String)+WaterBottle(hasWaterBottleIn: boolean)+setHasWaterBottle(newBottle: boolean) void+setColor(newColor:String) void+setBrand(newBrand: int) void+getHasWaterBottle():boolean+getColor(): String+getBrand ():String+toString():String

```
/src/WaterBottle.java - Eclipse
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Student.java StudentWater.java WaterBottle.java

7 public class WaterBottle {
8     private String name;
9     private boolean hasWaterBottle;
10    private String color;
11    private String brand;
12    public WaterBottle(String nameIn, boolean hasWaterBottleIn, String colorIn, String brandIn)
13    {
14        name = nameIn;
15        hasWaterBottle = hasWaterBottleIn;
16        color = colorIn;
17        brand = brandIn;
18    }
19    public WaterBottle(String nameIn, boolean hasWaterBottleIn)
20    {
21        name = nameIn;
22        hasWaterBottle = hasWaterBottleIn;
23    }
24    public void setName(String newName)
25    {
26        name = newName;
27    }
28    public void setHasWaterBottle(Booleen newBottle)
29    {
30        hasWaterBottle = newBottle;
31    }
32    public void setColor(String newColor)
33    {
34        color = newColor;
35    }
36    public void setBrand(String newBrand)
37    {
38        brand = newBrand;
39    }
40    public String getName()
41    {
42        return name;
43    }
44    public boolean getHasWaterBottle()
45    {
46        return hasWaterBottle;
47    }
48    public String getColor()
49    {return color;}
50    }
51    public String getBrand()
52    {return brand;}
53    }
54    public String toString()
55    {if (hasWaterBottle == true)
56        {
57            return "Name: "+name+"\nYou are thirsty"+" \nColor of Water Bottle: "+color+"\nBrand of Water Bottle: "+brand;
58        }
59        else
60        {
61            return "Name: "+name+"\nYou are not thirsty";
62        }
63    }
```

Java - SKhan_Custom_Classes/src/StudentWater.java - Eclipse

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Student.java StudentWater.java WaterBottle.java

```
1 //-----
2 // Author: Shyaan Khan    Period: 4    Date:
3 // Description:
4 //-----
5
6 public class StudentWater {
7     public static void main(String []args)
8     {
9         WaterBottle w1 = new WaterBottle("Shyaan Khan", true, "Red", "Arrowhead");
10        WaterBottle w2 = new WaterBottle("John", false);
11
12        System.out.println(w1);
13        System.out.println();
14        System.out.println(w2);
15        System.out.println();
16        w1.setBrand("Camelbak");
17        w1.setColor("Blue");
18        System.out.println(w1);
19    }
20
21 }
22
23 }
```

Console

<terminated> StudentWater [Java Application] C:\Program Files\Java\jre7\bin\javaw.exe (Oct 30, 2014, 12:22:28 PM)

Name: Shyaan Khan
You are thirsty
Color of Water Bottle: Red
Brand of Water Bottle: Arrowhead

Name: John
You are not thirsty

Name: Shyaan Khan
You are thirsty
Color of Water Bottle: Blue
Brand of Water Bottle: Camelbak