

Character Level Up

Java
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First off: there's a lot to this lab.
Take it one step at a time.

Overall Goal : Follow the steps after this.

1. Create a new method called “levelUp”
 - a. levelUp is similar to lab 15 where you spend points in your given skills.
 - b. If you level up to level 1, you start with 25 points (like lab 15).
 - i. If you level up past level 1, you gain another 10 points.
 - c. levelUp should ask the user to input the following
 - i. Strength points
 - ii. Dexterity points
 - iii. Intelligence points
 - iv. Constitution points
 - v. Charisma points
 - d. The input won't stop asking unless it gets a valid input.
 - i. (not negative, not above 10, not past how many points you have)
 - e. levelUp only does one pass so users can't spend over 10 points in a category.
 - f. Uses, setStrength, setDexterity, setIntelligence, setConstitution, setCharisma.

Step 1: **Remove** public from all global variables

1. This means the following variables:

- i. Role
- ii. Strength
- iii. Dexterity
- iv. Intelligence
- v. Constitution
- vi. Charisma

The reason for this is that we only want the “myCharacter” class to have the ability to access these variables. Nothing outside should be able to access these.

Step 2: Make the following “**private**” instead of “public”

1. The methods below
 - a. `setStrength()`
 - b. `setDexterity()`
 - c. `setIntelligence()`
 - d. `setConsitution()`
 - e. `setCharisma()`
2. NOT `setRole()`

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Step 2: Create two **new global variables**

1. Create `int level` and `int points`
 - a. Level is what level the player is (starts at 0)
 - b. Points is how many total skill points you can spend
2. These should not have public
3. In the constructor, give these variables default values of 0.

Step 3: Create a new method called “checkPoints()”

1. Check points has **an integer** as a **parameter**
2. Check points **returns a boolean**
3. Check points checks
 - a. if the input is greater than 10 or less than 0.
 - i. Returns false
 - b. if the input is greater than **points**
 - i. Returns false
 - c. Otherwise
 - i. Returns true

Step 4: Create the “levelUp()” method

1. Create a **Scanner**
2. Check what **level** the user is
 - a. If 0, level them up by 1
 - i. Give 25 **points** to the user
 - b. If > 0 , level them up by 1
 - i. Give 10 **points** to the user
 - c. Hint, remember they still may have points from previous, don't override previous points

Step 5: Start spending points

1. **Spend points** in the following categories (1 pass only)
 - a. Strength, Dexterity, Intelligence, Constitution, Charisma
2. Use **checkPoints()** to see if the **input values is valid**
 - a. Ask for a new input until it's valid
3. Use **set methods** to set the characters skills
 - a. Ex: `setStrength()`
4. Subtract valid **input** from **points**.

Step 6: Ending Conditions

1. You've finished the entire pass
 - a. Level up complete, tell the user how many points they have for next time.
 - b. Use **myToString()** to print out everything
2. Total **points** reaches 0
 - a. End immediately, tell the user they spent all points
 - b. Use **myToString()** to print out everything

Step 7: Create a myCharacter

1. Get a role from the user
2. Create a myCharacter in your starter.java
 - a. Give it that input role
3. levelUp the myCharacter above to level 2.
 - a. Spend points.

That should be it!

Good luck adventurer!