WIX1002 Fundamentals of Programming

3rd VIVA

Pokémon Generator

Pokémon is a famous game in console world. You are required to create a Pokémon Generator to generate a Pokémon.

Define a class named Pokémon. Each Pokémon has the following attributes:
1. A unique ID
2. Pokémon Name
3. Element Type
4. Hit Point (HP)
5. Attack
6. Defense
7. Speed
8. Special
9. Level

In the class, define a method to generate a random value for Hit Point (15-25), Attack (10-17), Defense (10-17), Speed (5-15) and Special (5-10) stat with the respective range for the Pokémon.

There is also a method to increase the level of Pokémon by 1. In the process of leveling up, the hit point of Pokémon will be increase in range of 2-5, and the other stat will increase by 1-3. The class also able to display all the status of the Pokémon.

Test your class in a tester program by generating a Pokémon, show the initial stat, level it up by 3 level and show the stat after leveling.

Barbie Doll Generator

You are required to create a Barbie Doll Generator generate a unique doll with different characteristic.

Define a class Doll. Each doll has the following attributes:
1. The doll can only have one name.
2. The doll can have the hair color of Red, Green or Blue.
3. The doll can wear Shirt, Dress or Jacket.
4. The doll can have Long or Short hair.

The constructor of the Class will randomize the characteristic of the doll.

The class will consist of the following methods:
1. change the hair color of the doll.
2. cut the hair of the doll to short if it is long.
3. display the characteristic of the doll.
4. randomize the length of hair, color of hair and type of apparel of the doll.

Write a Tester program to generate a doll, display the characteristic, cut the long hair, change the color of the hair, display the resulting characteristic.