CS 102 - Lab 10

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1. Definition of a hierarchy of fruits is given below.
   - `Fruit` contains an abstract method `getVitamin()` that returns `String`.
   - `Fruit` contains a `String` field `color`.
   - Fruits are `Apple`, `Banana`, `Strawberry` and `Blackberry`. Apples are green, bananas are yellow, strawberries are red, blackberries are black. All these classes have zero parameter constructors.
     - Apple's vitamins are "A B12".
     - Banana's vitamins are "C D".
     - Strawberry's vitamins are "B5 E".
     - Blackberry's vitamins are "C K".
   - Apples and bananas grow on trees. All tree fruits provide a `void` method named `peel()`. Define a class (or interface?) named `TreeFruit` that has method `peel`. Make `Apple` and `Banana` extend (or implement?) `TreeFruit`.
     - When an `Apple` is being peeled, it prints out "Peeling an apple.".
     - When a `Banana` is being peeled, it prints out "Peeling a banana.".
   - Strawberries and blackberries grow on the ground. All ground fruits provide a `void` method named `pick()`. Define a class (or interface?) named `GroundFruit` that has method `pick`. Make `Strawberry` and `Blackberry` extend (or implement?) `GroundFruit`.
     - When a `Strawberry` is being picked, it prints out "Picking a strawberry."
     - When a `Blackberry` is being picked, it prints out "Picking a blackberry."

   a. Implement the classes.

   b. Implement a method named `prepareFruits` that takes a list of fruits and invokes tree fruits' `peel` method and ground fruits' `pick` method. i.e. You have to distinguish tree fruits from ground fruits.

```
public static void prepareFruits (ArrayList<Fruit> fruits) {
      // IMPLEMENT THIS METHOD
}
```

   c. Use the following main method to test your code.

```
public static void main(String[] args) {
      ArrayList<Fruit> fruits = new ArrayList<Fruit>();
      fruits.add(new Apple());
      fruits.add(new Banana());
      fruits.add(new Strawberry());
      fruits.add(new Blackberry());
      prepareFruits(fruits);
}
```