This lab assignment is individual.

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.

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

Test:
Use the following main method to test your code.

```java
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);
}
```