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/**
 * Name: Vu Nguyen
 * Student Number: T00612390
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 * Seminar number : 2
 *
 * Program Description:  This programs main function is to be the parent class for Tree, Flower,
Vegtable Classes.
 *                       This program also implements the Equals interface
 *
 */


abstract class Plant implements Equals
{

    private String name;

     //lifespan is in weeks
    private int lifespan;

    public static void main(String[] args)
    {

    }

    //default plant constructor
    public Plant()
    {
        name = "Undeclared name";
        lifespan = 0;

    }
    //parameterized plant constructor
    public Plant (String name, int lifespan)
    {
    this.name = name;
    this.lifespan = lifespan;

    }


     //abstract method to be used to describe the plant's useage
     abstract public void plantUsage();

     //abstract method to be used to return botanical name of plant
     abstract public void botanicalName();



    //getName returns name
    public String getName()
    {
        return name;

    }
```

```
    //getLifespan returns lifespan
    public int getLifespan()
    {
        return lifespan;

    }

    //setName sets the name
    public void setName(String name)
    {

        this.name = name;

    }
    //setLifespan sets the plants lifespan
    public void setLifespan(int lifespan)
    {
          //lifespan is in weeks
        this.lifespan = lifespan;
    }

     //toString displays plant() data
    @Override
    public String toString()
    {
        return String.format(getName() + " " + getLifespan());
    }



    @Override
    public boolean equals(Object o)
    {
        if(this == o)// self check
            return true;

        if(o == null)// null check
            return false;

        if(!(o instanceof Plant)) //type check and cast
            return false;

        Plant plant = (Plant)o;

        return this.getName().equals(plant.getName());
    }

}
```