

```

/**
 * Name: Vu Nguyen
 * Student Number: T00612390
 * Due Date : Oct 15 2019
 * Seminar number : 2
 *
 * Program Description: This programs main function is to be the child class to Plant,
 *                      and this program implements the Comparable interface and this program
creates Tree objects
 *
 */

```

```

public class Tree extends Plant implements Comparable<Tree>
{
    private Double height = 0.0;
    public static void main(String[] args)
    {

    }
    //unparameterized constructor
    public Tree()
    {
        super();
        height = 0.0;
    }
    //parameterized constructor
    public Tree(String name, int lifespan, Double height)
    {
        super(name,lifespan);
        this.height = height;
    }

    public Double getHeight()
    {
        return height;
    }

    public void setHeight(double height)
    {
        this.height = height;
    }

    @Override
    public void plantUsage()
    {

    }

    @Override
    public void botanicalName()

```

```
{
```

```
}
```

```
@Override
```

```
public int compareTo(Tree t)
```

```
{
```

```
    if(this.getHeight() < t.getHeight())
```

```
        return -1;
```

```
    if(this.getHeight() > t.getHeight())
```

```
        return 1;
```

```
    else {
```

```
        return 0;
```

```
    }
```

```
}
```

```
@Override
```

```
public boolean equals(Object t)
```

```
{
```

```
    super.equals(t);
```

```
Tree tree = (Tree)t;
```

```
    return this.getHeight().equals(tree.getHeight());
```

```
}
```

```
@Override
```

```
public String toString()
```

```
{
```

```
    return String.format(super.toString() + " " + height);
```

```
}
```

```
}
```