

ISEL

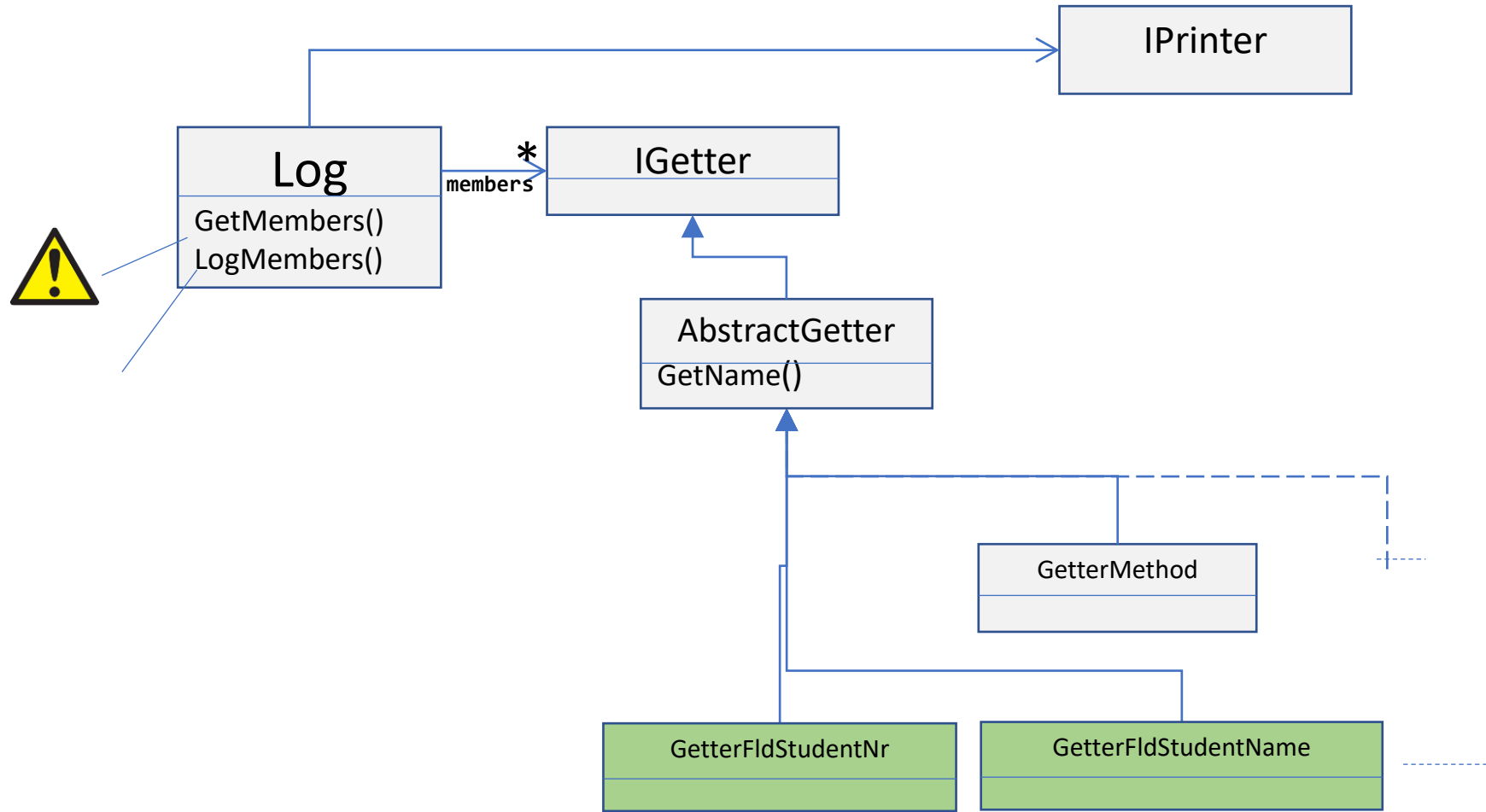
Ambientes Virtuais de Execução

2021

Week 9 – Logger exercise

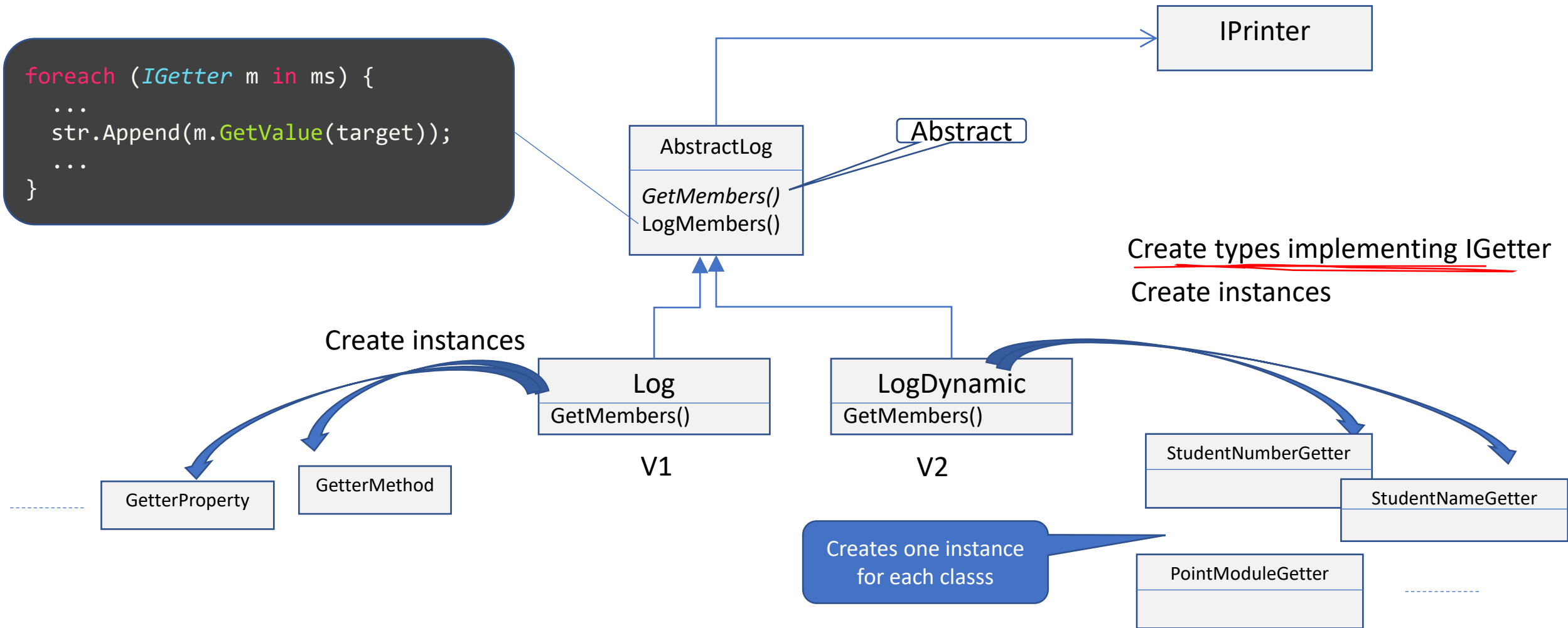
Passing behavior to annotations

Logger e.g. for Student



Log (reflect) e LogDynamic

```
foreach (IGetter m in ms) {  
    ...  
    str.Append(m.GetValue(target));  
    ...  
}
```



Next Goal: Format output

Approach 1 Not possible

```
public class LogFormatterFirstName : IFormatter
{
    /// <summary>
    /// The argument val is a Fullname that we want to extract the first word.
    /// </summary>
    public object Format(object val)
    {
        string name = (string) val;
        return name.Split(' ')[0];
    }
}
```

```
public class Student {
    [ToLog] public readonly int nr;
    [ToLog(new LogFormatterFirstName())] public readonly string name;
    ...
}
```


=> ERROR: Attribute constructor parameter 'formatter' has type 'IFormatter', which is not a valid attribute parameter type

Next Goal: Format output

Approach 2

```
public class LogFormatterFirstName : IFormatter
{
    /// <summary>
    /// The argument val is a Fullname that we want to extract the first word.
    /// </summary>
    public object Format(object val)
    {
        string name = (string) val;
        return name.Split(' ')[0];
    }
}
```

```
public class Student {
    [ToLog] public readonly int nr;
    [ToLog(typeof(LogFormatterFirstName))] public readonly string name;
    ...
}
```



Log (Reflect) exercise

Requirements:

- **Do not change AbstractLog.**
- Add support to IFormatter feature at Log.
- You may:
 - override the ShouldLog method.
 - Implement new classes.
 - change the ToLogAttribute.

=> Submit your solution with only ShouldLog and new Classes.

Log (Reflect) exercise

- **Step 1:** Implement the formatter feature admitting that **IFormatter** class has a parameter less constructor.
e.g. `[ToLog(typeof(LogFormatterFirstName))]` or
`[ToLog(typeof(LogFormatterTruncate))]`
- **Step 2:** Enable the use of **IFormatter** through a constructor with parameters:
e.g. `[ToLog(typeof(LogFormatterTruncate), "1")]`