

1. Identify two different bad smells in one or more of your user stories. If your code is already pristine and has no bad smells, then add bad smells that can be refactored.

The first bad smell is in US03 – Birth before Death. The bad smell in this code is inefficient string manipulation. Specifically, it occurs in the line:

```
if (self.birth_date is not None and self.birth_date.strip() != "") and (  
    self.death_date is not None and self.death_date.strip() != "")
```

Unnecessary complexity is introduced by checking if a string is not None and not an empty string by combining both conditions (is not None and strip() != ""). So, I simplified it to be a more direct and clear check:

```
if self.birth_date and self.death_date
```

The second bad smell is in US23 – Missing required fields. Specifically, it occurs in lines:

```
temp_list = [field for field, value in required_fields.items() if not value]  
missing_fields = temp_list
```

I introduced this bad smell for demonstration purposes. Unnecessary variable assignment is being done. The list comprehension for finding missing fields is stored in a temporary variable temp\_list which then gets assigned back to missing\_fields. This assignment is redundant and provides no additional functionality, making it a bad smell in the code.

The way I fix this is by assigning the list comprehension to missing\_fields directly like so:

```
missing_fields = [field for field, value in required_fields.items() if not value]
```

I eliminated the temporary variable by doing this.