

3 Create a file with department as root, year as subroot and student as an element

To create a file with a structure where the department is the root, the year is the sub-root, and students are *elements*, we can use an XML format. Here's an example of how you might structure this:

XML

```
<departments>
  <department name="Computer Science">
    <year name="2024">
      <student>
        <name>John Doe</name>
        <id>CS2024-01</id>
        <gpa>3.8</gpa>
      </student>
      <student>
        <name>Jane Smith</name>
        <id>CS2024-02</id>
        <gpa>3.9</gpa>
      </student>
    </year>
    <year name="2023">
      <student>
        <name>Emily Johnson</name>
        <id>CS2023-01</id>
        <gpa>3.7</gpa>
      </student>
    </year>
  </department>
```

```
<department name="Mechanical Engineering">
```

```
<year name="2024">
```

```
<student>
```

```
<name>Michael Brown</name>
```

```
<id>ME2024-01</id>
```

```
<gpa>3.6</gpa>
```

```
</student>
```

```
</year>
```

```
</department>
```

```
</departments>
```