A key challenge in managing large-scale (OpenSource) software projects is related to the version management. Multiple developers integrate new lines of code, change or delete others in parallel. Consequently, we have to record these different versions independently and to merge the individual adaptations to a common stage. The current quasi-standard for this task Git, a distributed revision control system in connection with other management and project tools.

Vision of LiaScript

LiaScript intends to transfer the idea of a distributed software development onto digital learning materials. Similar to coding projects one lecturer initiates the content of new MOOC. Based on the version management system everyone is now invited to improve, extend, translate or to adapt the course. A precondition for this integrative approach is a tool-less, easy to understand description format covering a large bandwidth of digital learning formats. For LiaScript we designed a textual description language that extends the Markdown notation and offers the opportunity to include:

1. Text-To-Speech combined with visual effects and transitions
2. media types including (images, movies, sound, ASCII-art),
3. executable and modifiable code examples (with versioning),
4. different formats of quizzes/surveys with hints and solutions,
5. free integration of JavaScript-functionality and HTML-elements

LiaScript is prepared for internationalization and supports different languages for one MOOC. Based on the textual representation the LiaScript-Interpreter generates online an web-representation.

Examples

### Tables
<table>
<thead>
<tr>
<th>Tables</th>
<th>Are</th>
<th>Cool</th>
</tr>
</thead>
<tbody>
<tr>
<td>☺️</td>
<td>😊</td>
<td>😎</td>
</tr>
</tbody>
</table>

### Multiple-Choice
Multiple of them can be selected, ...

- [ ] Do not touch!
- [X] Select this one ...
- [X] ... and this one too!
- [ ] also not correct ...

### Images and Movies
- ![image](img/lenna.jpg)
- ![movie](https://www.youtube.com/...)

Extended Examples

### Multi-Line-Plots
```javascript
var chart = new Chartist.Line('#chart', {
  labels: [1, 2, 3, 4],
  series: [[100, 120, 180, 200]]
});
</script>
```

### HTML & JavaScript
```javascript
<script>
  var chart = new Chartist.Line('#chart', {
    labels: [1, 2, 3, 4],
    series: [[100, 120, 180, 200]]
  });
</script>
```

### C++
```cpp
#include <iostream>
using namespace std;

int main() {
  int a = 5;
  int rslt = 0;
  for(int i=1; i<a; ++i) ...
}
```

http://www.elab.ovgu.de