

DSL: 领域专用语言

申思维

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Domain Specific Language

干嘛用它？ 它是啥？

数学

DSL: $1 + 1 = 2$

非 DSL: 一加一等于二

对这个公式，非 DSL 怎么办？

$$I_n = \int_0^{\frac{\pi}{2}} \sin^n x dx = \int_0^{\frac{\pi}{2}} \cos^n x dx = \frac{n-1}{n} I_{n-2}$$

$$\int \sqrt{x^2 + a^2} dx = \frac{x}{2} \sqrt{x^2 + a^2} + \frac{a^2}{2} \ln(x + \sqrt{x^2 + a^2}) + C$$

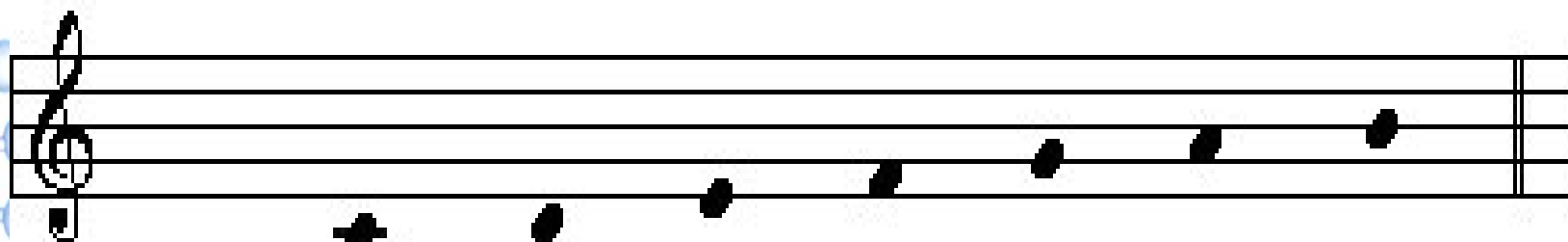
$$\int \sqrt{x^2 - a^2} dx = \frac{x}{2} \sqrt{x^2 - a^2} - \frac{a^2}{2} \ln|x + \sqrt{x^2 - a^2}| + C$$

$$\int \sqrt{a^2 - x^2} dx = \frac{x}{2} \sqrt{a^2 - x^2} + \frac{a^2}{2} \arcsin \frac{x}{a} + C$$

音乐

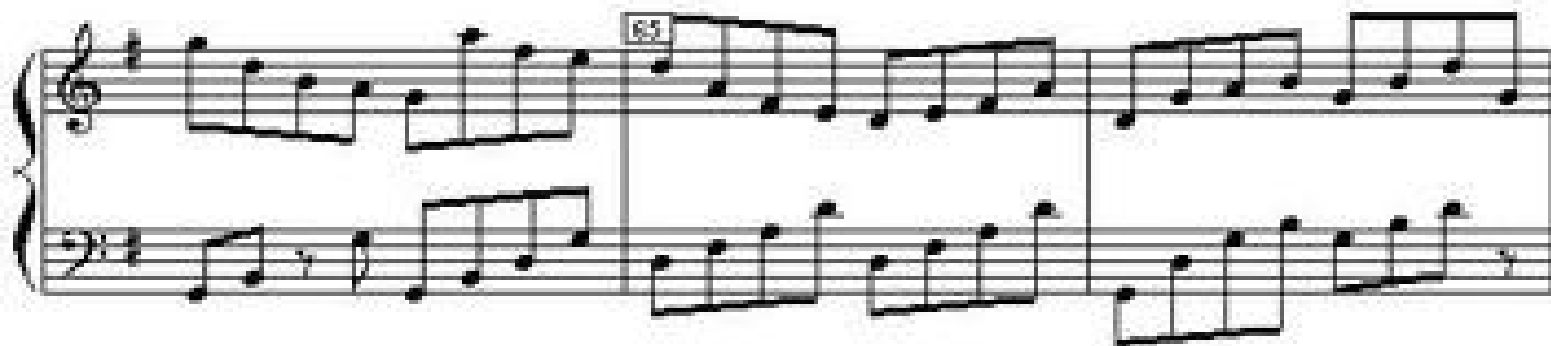
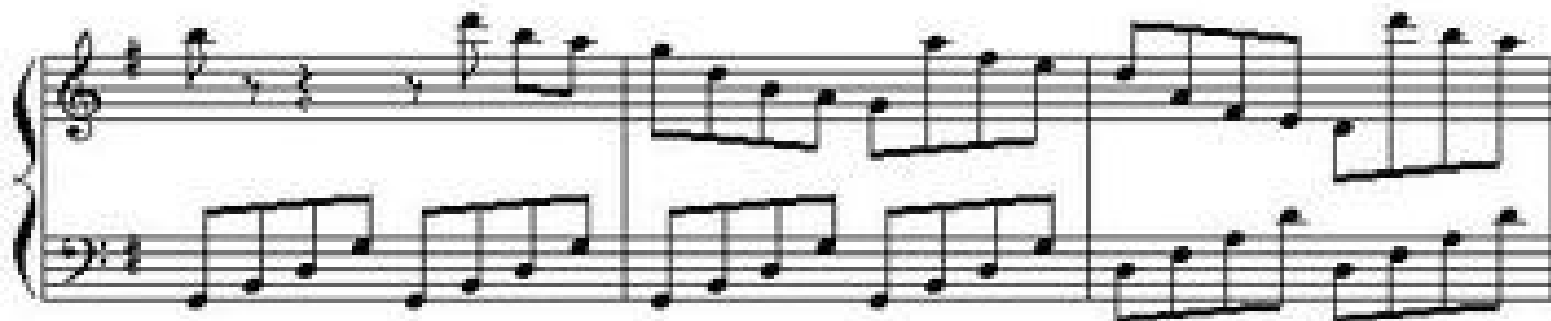
非 dsl: 都来咪发嗖啦西都

简谱: 1 2 3



(音名)	C	D	E	F	G	A	B
(唱名)	Do	Ruai	Mi	Fa	Sou	La	Xi
(译音)	斗	瑞	咪	发	搜	拉	西
(简谱)	1	2	3	4	5	6	7

非 DSL 怎么办？



化学

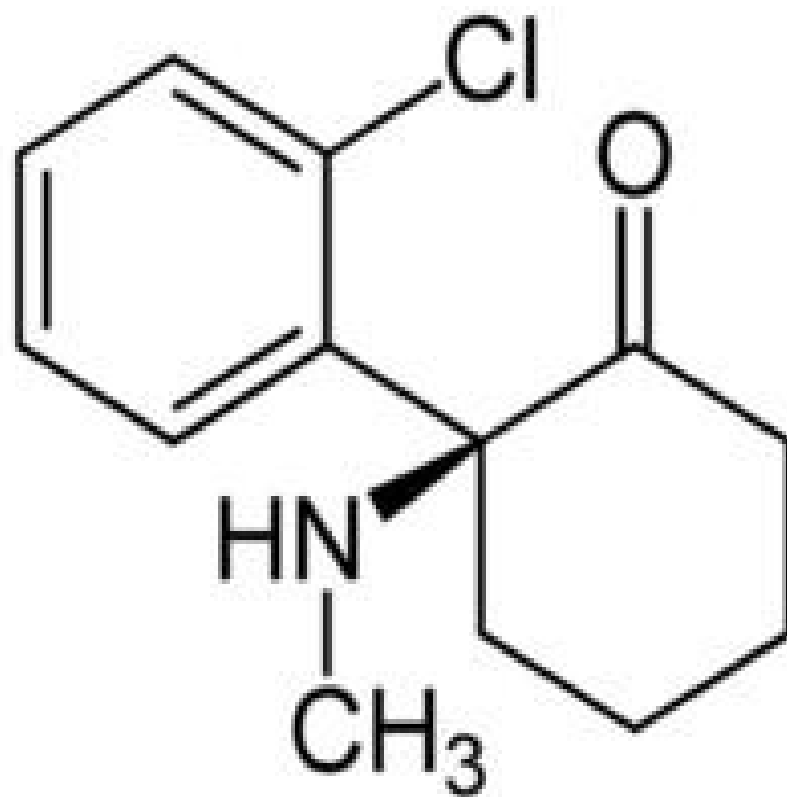
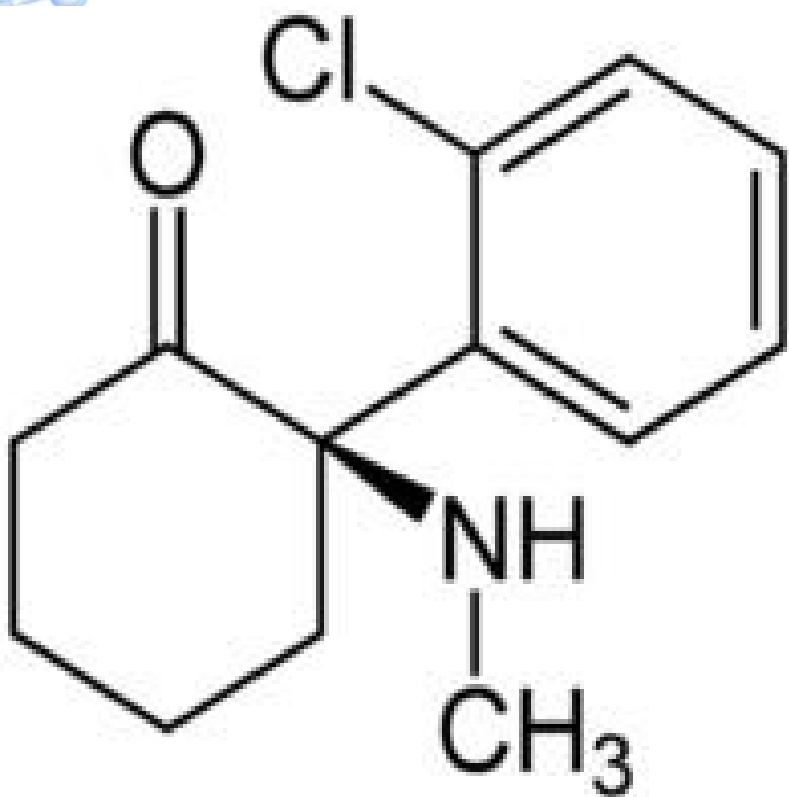


• C 碳 H 氢

• CO₂

• 二氧化碳

非 DSL 怎么办？



回到程序世界

```
var pb=Titanium.UI.createProgressBar({
  top:10,
  width:250,
  height:'auto',
  min:0,
  max:10,
  value:0,
  color:'#fff',
  message:'Downloading 0 of 10',
  font:{fontSize:14, fontWeight:'bold'},
  style:Titanium.UI.iPhone.ProgressBarStyle.PLAIN,
});
win.add(pb);
pb.show();
```

回到程序世界

```
<Alloy>
  <Window id="win" backgroundColor="white">
    <ProgressBar id="pb" message="Downloading 0 of 10" />
  </Window>
</Alloy>

"#win": {
  top: "10";
  width: "250";
  height: "auto";
  color: "#ffffff";
}
```



回到程序世界

controller:

```
$.pb.show();
```



DSL 大全

- 样式：用 css, sass, tss
- 视图：XML, jade/haml
- 配置文件：.properties, .yaml
- 业务逻辑：java/ruby/python...
- 数据库：SQL, (non SQL)
- 自动化脚本：rake, ant, maven, grunt
-



样式 DSL: CSS

- ```
“#my_button”: {
 color: 'red';

 width: '200px';
 height: '30%';
 border: '1px solid blue';
}
```

# 视图 DSL:

- HTML:

```
<body>
 <table>
 <tr>
 <td>lalaa</td>
 </tr>
 </table>
</body>
```

- Jade:

```
body
 table
 tr
 td lalala
```



# 配置文件 DSL(yaml)

```
development: &development
```

```
 adapter: mysql2
```

```
 host: localhost
```

```
 username: root
```

```
 password:
```

```
 database: happystock
```

.

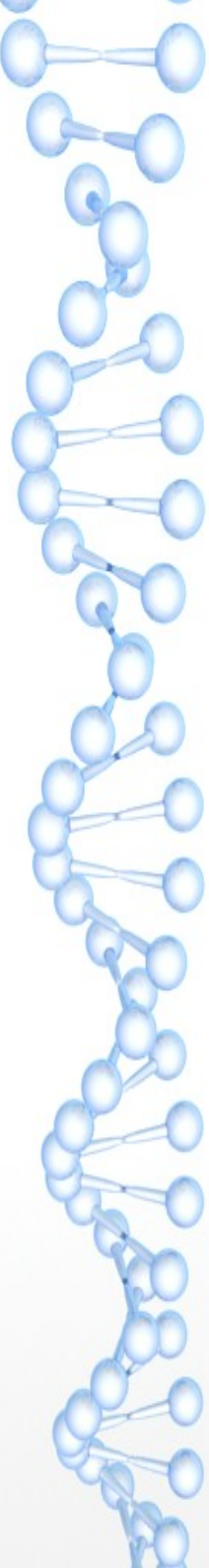


# 数据库 DSL

- SQL  
select \* from users;  
insert into users values (default, 'Jim', 'male');
- NonSQL:  
Users.all  
Users.where({'sex': 'male'})  
Users.create({'name': "Jim", 'sex': 'male'})



# 自动化脚本 DSL



```
grunt.initConfig
 coffee:
 options:
 bare: true
 files:
 [
 expand: true
 flatten: true
 cwd: 'src/controllers/'
 src: ['*.coffee']
 dest: 'app/controllers/'
 ext: '.js'
]
 grunt.loadNpmTasks 'grunt-contrib-coffee'
 grunt.registerTask 'default', ['coffee', 'jade', 'stss']
```



谢谢！

申思维 [siwei.me](http://siwei.me)