

Bonus slides

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R/R

Reduce/Reduce conflicts can happen and should be solved by grammar rewriting.

- Avoid them, the wrong solution might force the parser to run forever!
- **Can you devise a grammar for that?**

For Heroes only!

```
%start G
%%
G: S 'b'      { . . . };
A: B          { . . . };
B: A          { . . . }
   | 'a'      { . . . };
S: A          { . . . };
%%
```

- Will it ever terminate?

For Heroes only!

```
%start G
%%
G: S 'b' { . . . };
A: B { . . . };
B: A { . . . }
  | 'a' { . . . };
S: A { . . . };
%%
```

- Will it ever terminate? No.

For Heroes only!

```
%start G
%%
G: S 'b' { . . . };
A: B { . . . };
S: A { . . . };
B: A { . . . }
| 'a' { . . . };
%%
```

- What about this?

The King's grammar!

[Inside Yacc specification]

```
%token STORY
```

```
%%
```

```
S: S STORY      {...};
```

```
%%
```

[Inside Lex specification]

```
%%
```

```
"c'era una volta un re, seduto sul  
sofa' che chiamo la serva e le disse:  
\"raccontami una storia\" e la serva  
incomincio' "      {return STORY;}
```

```
%%
```

- Run Yacc over it and get the error: "Fatal error: start symbol S does not derive any sentence."