

# CS305 Homework 02

Yiğit Aras Tunali

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# Context Free Grammar for CSML

The set T, the terminal symbols, and the set V-T ,the non-terminal symbols have been provided in the homework file.

## Rules of the Grammer:

```
<prog>  -→ <elementlist> | e

<elementList> -→ <element> <elementList>
                  | <element>

<element> -→ <beginCourse> <classList> <endCourse>
                  | <beginConstraint> <itemList> <endConstraint>

<beginCourse> -→ tOPEN tCOURSE <courseAttrList> tCLOSE

<courseAttrList> -→ <courseAttr> <courseAttrList>
                  | <courseAttr>

<courseAttr> -→ tCODE tSTRING
                  | tNAME tSTRING
                  | tTYPE tSTRING

<endCourse> -→ tEND tCOURSE tCLOSE

<classList> -→ <class> <classList>
                  | <class>

<class> -→ <beginClass> <meetingList> <endClass>

<beginClass> -→ tOPEN tCLASS <classAttrList> tCLOSE

<classAttrList> -→ <classAttr> <classAttrList>
                  | <classAttr>
```

```

<classAttr> --> tSECTION tSTRING
    | tINSTRUCTOR tSTRING
    | tCRN tNUM
    | tCAPACITY tNUM

<endClass> --> tEND tCLASS tCLOSE

<meetingList> --> <meeting> <meetingList>
    | <meeting>

<meeting> --> <beginMeeting> <meetingAttrList> <endMeeting>

<beginMeeting> --> tOPEN tMEETING

<endMeeting> --> tSELF

<meetingAttrList> --> <meetingAttr> <meetingAttrList>
    | <meetingAttr>

<meetingAttr> --> tSTART tTIME
    | tEND_A tTIME
    | tDAY <day>

<beginConstraint> --> tOPEN tCONSTRAINT tCLOSE

<endConstraint> --> tEND tCONSTRAINT tCLOSE

<itemList> --> <item> <itemList>
    | <item>

<item> --> <beginItem> <itemAttr> <endItem>

<beginItem> --> tOPEN tITEM
<endItem> --> tSELF

<itemAttr> --> tCODE tSTRING
    | tCRN tNUM

```

$<day> \rightarrow tMON \mid tTUE \mid tWED \mid tTHU \mid tFRI$