

# Lab 11 Design Tree for Card Game War

Legend:  
- abstract step  
\*\* concrete step

Level 0

```
** Ask for input, while  
input wrong ask again  
- p for play  
- s for show  
- e for exit  
** repeat (go back to  
beginning)
```

Level 1

```
exit  
** print Thanks for  
playing  
** exit
```

```
show score  
** print num rounds won  
(human and computer)  
** print scores (human  
and computer)
```

```
play  
** randomly pick comp  
card (1,13)  
** randomly pick human  
card (1,13)  
- determine winner
```

Level 2

```
determine winner  
** if human card > comp card:  
** print human won  
** increment human round counter  
** add card values to human score  
- print card values  
** if comp card > human card:  
** print comp won  
** increment comp round counter  
** add card values to comp score  
- print card values  
** if comp card == human card:  
** print tie  
- print card values  
** get two more random cards  
** go back to beginning of this function
```

Level 3

```
print card values  
** if 1, print A  
** elif 11, print J  
** elif 12, print Q  
** elif 13, print K  
** else print number
```