In the input we're given the following a set of time slots[1]. These time slots consits of a set of days MWF, MW, TR and a time in 24 hour format. Additioally were given a set of TA's that have their own schedule that must be adhered to. We're looking for the existence of as assignment(and if it exists, the optimal solution) such that all time slots are filled with available TA's. Enter OR-Tree based search.

[1]Time slots will be denoted $TS = (D, T)$ where $D \in \{MWF, MW, TR\}$ and $T = \{x : y | 00 \leq x \leq 23 \wedge 00 \leq y \leq 59\}$. I.e. MWF0900 and TR2100.