

Parsing Checklist:

*Work way from top down for parsing ↓*

### Headers

Check that headers are spelled correctly (Parkers parse.hs code)

**If** they are: Continue

If they are **not**: Quit and write to output.txt “Error while parsing input file”

### ***HARD CONSTRAINTS***

#### Machine/Task Validity

Check that all hard constraint tuples are of the form ((1-8),(A-H)).

**If** they are: Continue with the individual constraint error checks

**If** they are **not**: Quit and write to output.txt “invalid machine/task”

#### Forced Partial Assignments

Check that all *forced partial assignment*: tuples satisfy (there are no two pairs with the same machine **AND** there are no two pairs with the same task)

**If** all above conditions are met: Continue with creating list of tuples for forced partial assignments and pass it along to Ryan and Danny.

**If** any of the above conditions are **not** met: Quit and write to output.txt “partial assignment error”

### ***SOFT CONSTRAINTS***

#### Machine Penalties

Check if machine penalties hold exactly 8 lines with 8 natural numbers.

**If** these above conditions don’t hold: Quit and write to output.txt “machine penalty error”

**Else** if it does hold: Continue through and use this list of lists

### Too-near penalties

Same as Machine/Task Validity check if (task1, task2, p) is of the form ((A-H), (A-H), (Natural Number))

**If** of the above form: continue and pass along data to Danny and Ryan

**Else:** Quit and write to output.txt "invalid task"

For all these soft constraints, if the system expects a natural number and the input does not provide one, then the system should terminate with the message "invalid penalty".