# Log

## November 22

* Getting and validating the environment (SWIPL) was working correctly (1 hour)
* Implemented ListAll function from class (.1 hour)
* Able to generate the four suits (.25 hours)
* Able to display a card correctly (.5 hour)
* Able to create all cards for a suit (.25 hour)

## November 23

* Able to create a deck of cards (.25 hour)
* Implemented the replace function from class (.1 hour)
* Able to implement a face value cards as a letter (.5 hour)
* Added comments (.25 hours)
* Able to shuffle deck (.1 hour)

## November 24

* Able to deal cards from the deck (1 hour)
* Able to display a list of cards correctly (.5 hour)
* Implemented skeleton of the round loop (.75 hour)
* Able to get and print hands for the board (.25 hour)
* Able to differentiate between Human and Computer (.5 hour)

## November 25

* Added ability to remove an element at the nth location and return the value (1 hour)

## November 26

* Able to get the move type the human wishes to make, and ensure it’s a validate choice (.5 hour)
* Human is able to trail cards (1.5 hours)
* Computer can trail cards (.25 hour)
* Able to deal cards after both hands are empty (1 hour)

## November 27

* Able to get list input [Later removed from game] (.5 hour)
* Spent time trying to debug user input not bouncing back correctly, but failed to fix (2 hour)

## November 28

* Able to remove matching symbols on table for capture, and add those cards to pile – Which implements capturing (2 hour)
* Spent more time trying to debug invalid move input, at this point I decided to scrap the system (1.5 hour)
* Rewrote the system to get each input individually and to end it with -1. (1 hour)

## November 29

* Invalid numeric input can sometimes bounce back to the prompt for move action (1 hour)
* Can validate that at least once card is captured (.25 hour)
* Able to display piles and decks to the table (.25 hour)
* Show action menu before each player makes their move (.25 hour)
* Rewrote program to use prompts instead of writes when user input is desired (.75 hour)
* Polished up the multiple input function to use less clauses (1 hour)
* Fixed string input crashing the program (.25 hour)

## November 30

* Debugged the program on why it would get stuck in an infinite loop after a player did a capture
  + Time to trace the error to an erroneous check of isHuman on the computer’s trail function (.75 hour)
* Human is able to capture sets (1 hour)
* Restructured code so new clauses are in their correct categories (.5 hour)
* Replaced my clause of addIfNotDuplicated with the native sort after getting your approval to use it (.25 hour)
* Wrote skeleton of computer outputting its move (.5 hour)

## December 1

* Fixed all outstanding singleton variables warning (.5 hour)
* Computer is able to make captures (1 hour)
  + Required adding multiple clauses to get the indices of the matching cards. Once that was done, it was able to use the same capture function as the human did.
* Fixed table printing twice in some move combinations (.25 hours)
* Able to create a build which sums to a target value, and mark it as a reserved value (This value is not respected by any other logic yet) (1.5 hour)

## December 2

* Able to display builds and multi builds to the screen with correct formatting (.75 hour)
* Added an isBuild function to determine if a list is a card or a build (.5 hours)
* Able to get value of a build (.25 hours)
* Able to get symbol of a build (2.5 hours)
  + The long time was due to a combination of finding a subtle bug in implementation which caused a logic error in recursion, and having to rewrite some supporting functions which relied on knowing both the symbol and the value before running
* Added an atomize Cardlist function and a rebuild card from atom list functions (1.75 hour)
  + This takes a list of cards and makes a list of their atoms
  + This ended up having no use for the current problem, however it ends up being useful for flattening builds into cards for adding to piles

## December 3

* Fixed bug of builds of odd number cards not displaying correctly (.5 hour)
* Able to load in a file and get into the round state (1.25 hours)
* Converted all test cases to work with internal structure of program (.5 hour)
* Removed singleton variable warnings (.25 hours)

## December 4

* Added helper clauses to add cards to pile, which flatten a build using the previously useless atomize build and rebuild (1 hour)
* Updated player printing to be cleaner (.5 hour)
* Play tested game to get a better feel for how it runs and what bugs there are (1 hour)