Term Project

- Select a game that you wish to evaluate
  - You can select an open source game that you can modify or a game that you are developing
  - Good examples are Python versions of Pacman, Super Mario
    - You can also select a classic open source game implemented in your preferred language
- State your research question
  - Must be relevant, simple and testable
  - For example, you can test the effect of maze complexity on player enjoyment in Pacman
    - Does maze complexity have an effect on the playability of Pacman?
- State your null and alternative hypotheses
  - H0: Maze complexity does not have an effect on duration of level completion
  - H1: Maze complexity does have an effect on duration of level completion
- Select appropriate method
  - Think aloud OK if followed by proper coding/analysis
  - Interviews OK if followed by proper coding/analysis
  - Standard questionnaires OK
  - Heuristics not allowed unless you are comparing two sets of heuristics or you are designing a new set of heuristics/ extending an existing set
    - Extending NOKIA mobile game playability heuristics for touchscreen devices OK
    - Developing a new set of heuristics for puzzle games (and then testing them) OK
    - Applying GAP or PLAY heuristics (or another set) on an existing game NOT OK
- Select/invite subjects
- Design the experiment (allocation of stimuli, treatment design and related concepts)
  - Try to eliminate confounding factors
  - Think about the duration and administration of the evaluation
- Run the test
- Carry out the appropriate statistical analysis
  - We discussed several methods in the course

- Draw your conclusions based on your statistical analysis
  - Reporting style is APA style. Here is a nice PDF that summarises the APA style for different tests: https://depts.washington.edu/psych/files/writing_center/stats.pdf
- Write a report also explaining your results in light of previous research
  - Google Scholar can be a good starting point for literature search
  - Use the ACM CHI paper template at https://chi2018.acm.org/chi-proceedings-format/
  - 4 pages + 1 page for references
  - Report will be in English
  - Intelligibility will also be graded so after finishing the writeup, read and re-read to polish the language
- Grading of the report will be based on your lecturer reading your reports as a reviewer
  - Every major problem will incur a 15 point penalty
    - Major problem examples:
      - Hypothesis definitions problematic
      - Statistical analysis flawed or is missing crucial steps
      - Experiment design has flaws
      - Incorrect conclusions
      - Literature review incomplete or superficial (aim for reading and reviewing at least 6-7 earlier studies)
      - The reported project deviates strongly from the project proposed/presented in class
  - Every minor problem will incur a 5 point penalty
    - Minor problem examples:
      - Readability of the report
      - Statistical analysis incorrectly reported
      - Figures/plots not legible (on screen OR when printed)