Methodology for CSI4202 Research

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    - ▶ Both of these components will be deliberately evaluated.

- ▶ The implementation methodology should highlight:
  - ▶ The technologies used in developing your artefact
  - ▶ The justification of your selections (perhaps in comparison to other approaches)
  - ▶ How things were put together/built (replication should be possible)
  - ▶ Limitations of the current approach.
- ▶ Overall this will be evaluated on
  - ▶ Appropriateness of the technology employed. (3 points)
  - ▶ Overall quality of implementation. (4 points)
  - ▶ Justification of the approaches (awareness of alternatives). (6 points)
  - ▶ Identification of appropriate limitations. (2 points)

Project: Graphical Password Authentication Scheme

- ▶ Design
    - ▶ what video?
    - ▶ Size & duration of video
    - ▶ Number of grids
    - ▶ Size of grids
    - ▶ Snapshot of interface
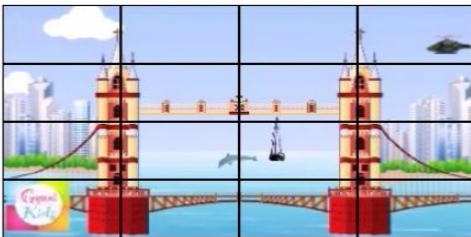
- ▶ Implementation
  - ▶ Sign-up form
  - ▶ Data storage: authentication data stored in a MySQL database
  - ▶ Programming languages: PHP & HTML
  - ▶ Metadata tools in anticipation of evaluation requirements

- ▶ The evaluation methodology should highlight:
    - ▶ A description of the sample and population
    - ▶ Data collection
    - ▶ What techniques are employed in the analysis and why they are appropriate
    - ▶ How the models/techniques themselves are evaluated
    - ▶ Decision criteria used
    - ▶ Limitations based on the methods (data, techniques) used.
- ▶ Overall this will be evaluated on
    - ▶ Appropriateness of the approaches (data, models/method of anlaysis, research question). (3 points)
    - ▶ Justification of the techniques/methods. (2 points)
    - ▶ Correct execution of analysis or evaluation procedures. (3 points)
    - ▶ Identification of appropriate limitation. (2 points)

Evaluation of Graphical Password Authentication Scheme

- ▶ Comparison with traditional text and image passwords
    - ▶ average password creation time
    - ▶ average confirmation time
    - ▶ creation success rate
    - ▶ login time (memorability)
- ▶ Anaysis: ANOVA + post-hoc comparisons of means
- ▶ User Satisfaction Evaluation
    - ▶ ease of use
    - ▶ usefulness
    - ▶ likeability
- ▶ Population & Sample

- ► There will be a separate methodology presentation.
    - ► Both implementation and evaluation methodologies will be evaluated here.
    - ► Accounts for 20% of your course marks.
    - ► Methodology still has to be documented well in the formal thesis document.