Word Prediction for Universal Access

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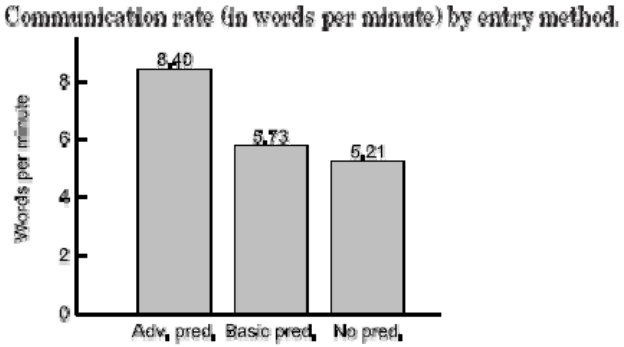
Vision of Goals

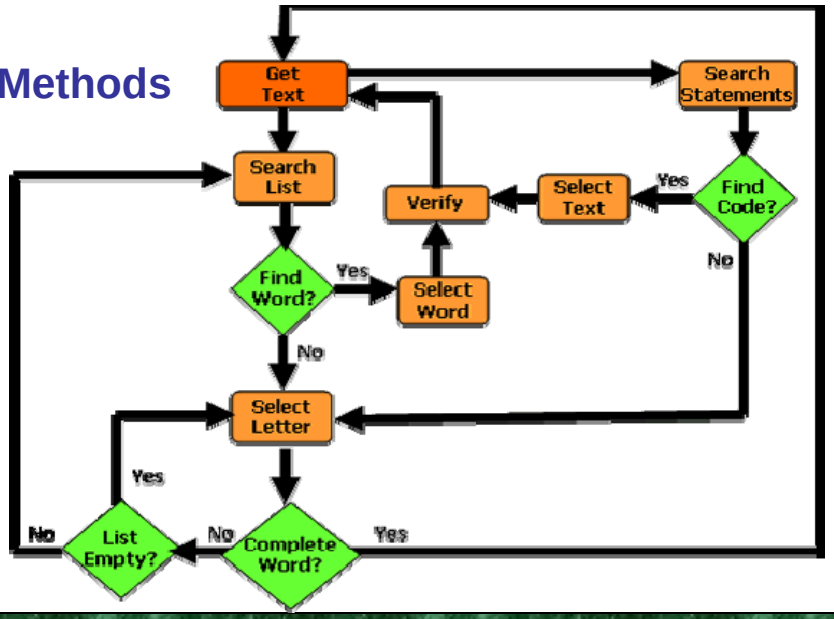
- Improve text entry rate with word prediction.
- Provide an OS-independent & mobile API.
- Build confidence for people with disabilities to pursue careers in computing fields.

Previous Work

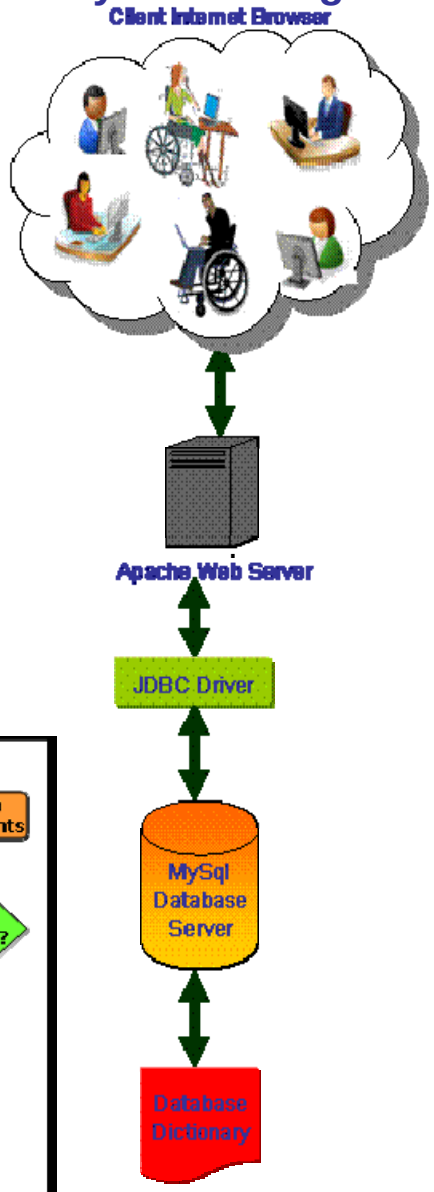
1. Semantic and Syntactical Association
2. N-gram model
3. Recency of Words



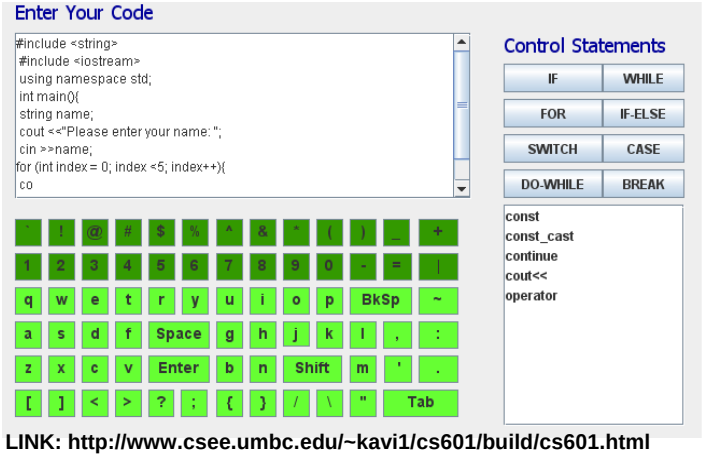
Methods



System Design



Implementation



LINK: http://www.csee.umbc.edu/~kavi1/cs601/build/cs601.html

Preliminary Results

- Four participants typed 180 characters of C++ code in about 5 minutes

Future

- Interface layout
- Inline Prediction
- Runs in the Background
- Individual User Accounts
- Customization of Dictionary

References

1. I Sanders and C-L Tsai. Word Prediction Strategies in Program Editing Environments. *SACJ*, (20):18–24, December 1997.
2. Ian Sanders, Ian S, and Andrew Russell. Using syntax to improve word prediction in a programming environment, 2004.
3. Jianhua Li and Graeme Hirst. Semantic knowledge in word completion. In Assets '05: Proceedings of the 7th international ACM SIGACCESS conference on Computers and accessibility, pages 121-128, 2005. ACM.