Java-DSP – Current and Future Improvements

Shalin Mehta, Arizona State University

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DSP Quiz

- Contains multiple choice questions with facility to add figures in questions and answers.
- Links to J-DSP Demos, Videos and DSP lecture notes.
- Evaluates students’ performance at the end of each chapter.
- Uses .csv files to create databases.

Highlights of the work

- Online DSP Quiz integrated with J-DSP environment.
- Quiz statistics to better understand students’ performance.
- Support for simultaneous multiple simulations.
- Interactive animated demos.
- Integrated videos with J-DSP simulation.

Front Page (Quiz)
Main Page (Quiz)

Planned Quiz Functions

- Quiz Edit: Provides support for database update (changing the data (.csv) files) without logging into the server and from the webpage itself.
- Quiz statistics: Generates statistics to measure students’ performance (Chapter wise, Question wise and Student wise distributions).
- Administrator Login: A new privileged login restricts the access of quiz edit, statistics and other functions limited to the administrators.

Quiz Edit (Interface)

Simultaneous Multiple Simulations

- Currently supports three simultaneous simulations, completely independent to each other.
- The number of simulations running concurrently can further be increased.
- Communication between simulations, e.g. the functions like copy and paste between simulations, comparison between simulation results.
- Support for the students to save their simulations on the server.
**Animated Demos**

- Each quiz question will be associated with an interactive demo with an optional audio support.
- Support is provided to change the animation speed and to completely skip the animation.
- Animation creation is as easy as creating a simulation, without any additional overhead.

**Integrated Videos**

- Each quiz question will be associated with an excerpt of DSP video lecture.
- Opens a video in J-DSP simulation environment.
- Support for working on the simulation while video is being played in the same window.
**Video Integrated in J-DSP Simulation**

The J-DSP Editor allows for the integration of videos into simulations, enhancing user engagement and comprehension.

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**Links to DSP Lecture notes**

- Each quiz question can be linked to a part of the DSP lecture note, pertaining to the given question.
- Additional notes can be edited into the Comments area of the quiz window, which gets activated as soon as the question is evaluated.

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**Other Improvements**

- Arrange Blocks functionality.
- Support for Scroll-bar to create large simulations that extend beyond normal window’s dimension.
- News line integrated within the simulation to highlight any ongoing changes, new features or any other information.

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**Thank You!!!!!!!!!!**