Spatial Ability
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Virtual Training Environment
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Online Experiment Creation Tool

PHP is a server-side scripting language which allows programmers to create dynamic web pages

Dynamic Web Pages

Database Model

User Table

Student Cube Test Answers

Student Paper Test Answers

Student Pic Test Answers

MySQL is an open source Database Management System (DBMS).

Experiment Table

Key: Exp ID

Hand Detection

Skin Color Method

Webcam User Interface

The webcam interface will allow users to interact with the virtual training environment (VTE) without the use of a keyboard and mouse. The VTE is part of our Advanced Distance Learning Technology (ALT).

Hand Tracking

Flock of Features Method

In order to create the webcam interface, Computer Vision (CV) techniques will be used to detect a human hand and track it as it moves through the background.

The VTE will allow the instructor and students to interact in real-time with the virtual classroom or laboratory. The VTE is synchronous and requires users to log into the system at a specific time, similar to a real world classroom.

References