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| **My Music Mosaic**   |  |  |  | | --- | --- | --- | |  | March 13 2013  Amanda McIntyre | Amanda McIntyre  Jaylyn Dawson  Molly Satterfield  Joshua Vargas | |  |  |   **Technical Field**  This project focuses on the field of computer science.  **Background Information and Prior Art**  The Center for Children in San Diego wanted an application to help children who had suffered from abuse express themselves in a tangible way. They commissioned students at UAT through the Greater Good Foundation to create this application combining a musical keyboard with digital art.  There is no prior art.  **Project Description and Innovation Claim**  My Music Mosaic is an application that will allow troubled youths to express themselves using a musical keyboard and get a visual representation of the music on the computer screen. The output will represent a physical painting, and the users will be able to save and print their creations when they are finished.  The innovation is the visualization of real time music to create a finished piece of art.  **Usage Scenario**  Any person that needs a tangible representation of their feelings will receive that from the using the application My Music Mosaic.  **Evaluation Criteria**  Do visual representations of notes appear on the screen when a user presses a key on the digital keyboard?  Do these images represent the note in regards to pitch, velocity, duration, and time?  Do the notes create an image that is unique and aesthetically pleasing?  Can the user save their image once they are finished?  Is the user interface intuitive and easy to navigate?  **Objectives and Tasks Associated with the Project**  Objectives of the project include envisioning how to visualize music, creating art works to be used in the application, creating a working prototype of the application that works with a musical keyboard, testing the prototype with users, and revising the application.   * + Design     - Meeting with team members to brainstorm     - Creating sketches for our ideas   + Creating art assets     - Design brush images     - Design the graphical user interface and assets associated with that   + Programming     - Learn the language and midi inputs     - Design the application based on object oriented and mvc design practices     - Debug and refine   + Testing     - Create questions     - Test using students at UAT     - Test using children from the Center for Children     - Gather input   + Revising     - Review the input from the user testing     - Apply what was learned to improve the application   **Description of Design Prototype**  The prototype of this project will be a fully functional, computer application that will allow users to play music on a digital keyboard and see the notes represented on the screen. They will be able to save their images to the computer, modify certain options within the application, and view help information. The prototype will be usable if a midi keyboard is plugged into the computer, and the application is opened. An installer for an executable file will be included, or the application can be run from the source files using the Processing Development Environment version 2.0 or higher.  **Evaluation Plan**  The product has received extensive user-testing from various age and social groups, including the children from The Center for Children. They have confirmed that each of the evaluation criteria has been met.  **Project Completion Assessment**  The completed project fulfilled every proposed requirement. The project was approached with an open mind, and an intention to learn the tools and develop the product simultaneously. For this reason, it is the team’s opinion that the product went above and beyond original expectations. The product features real time interactivity and produces a realistic, diverse, and aesthetic outcome. The only problems that arose involved work allocation and time management, but the product was still completed on time, so this wasn’t a major issue.  **Appendices**  No additional appendices. |