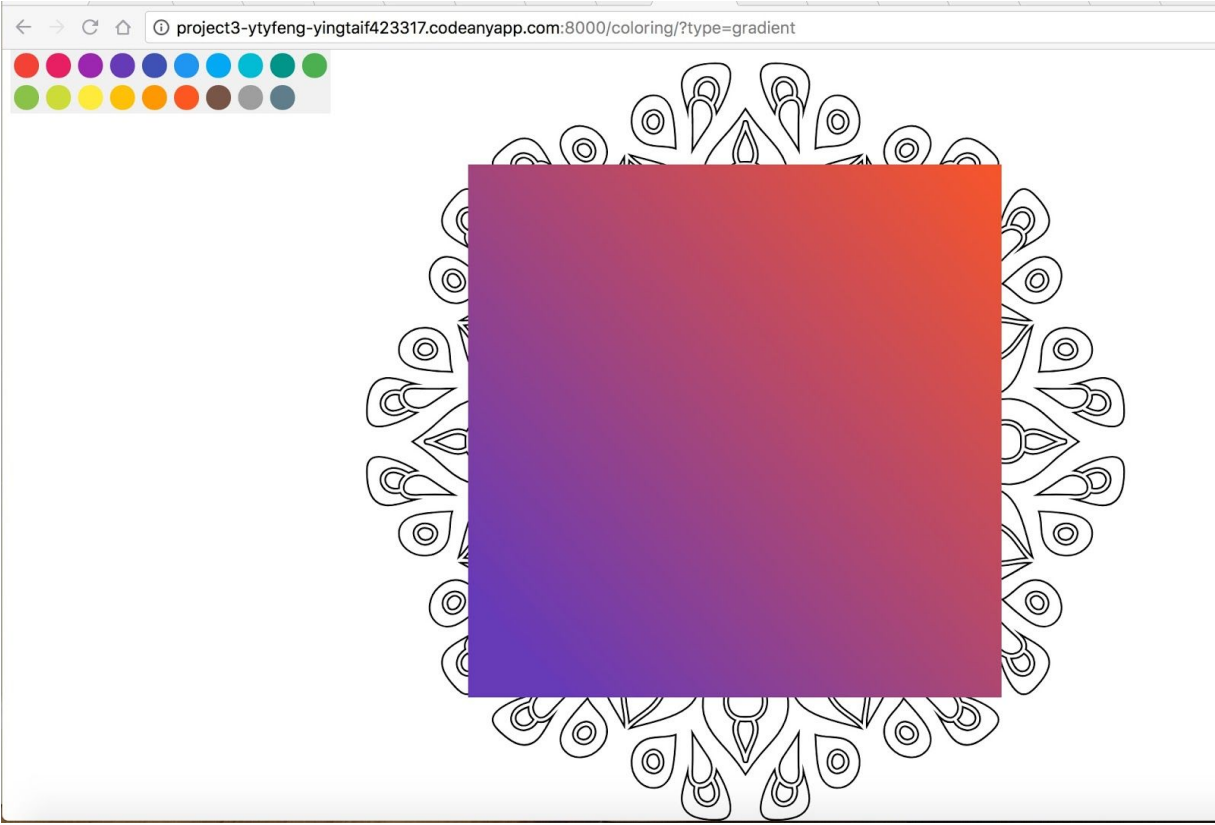


Design report

P3 Interactive Coloring Book

Exercises: 1a, 1b, 1c, 2

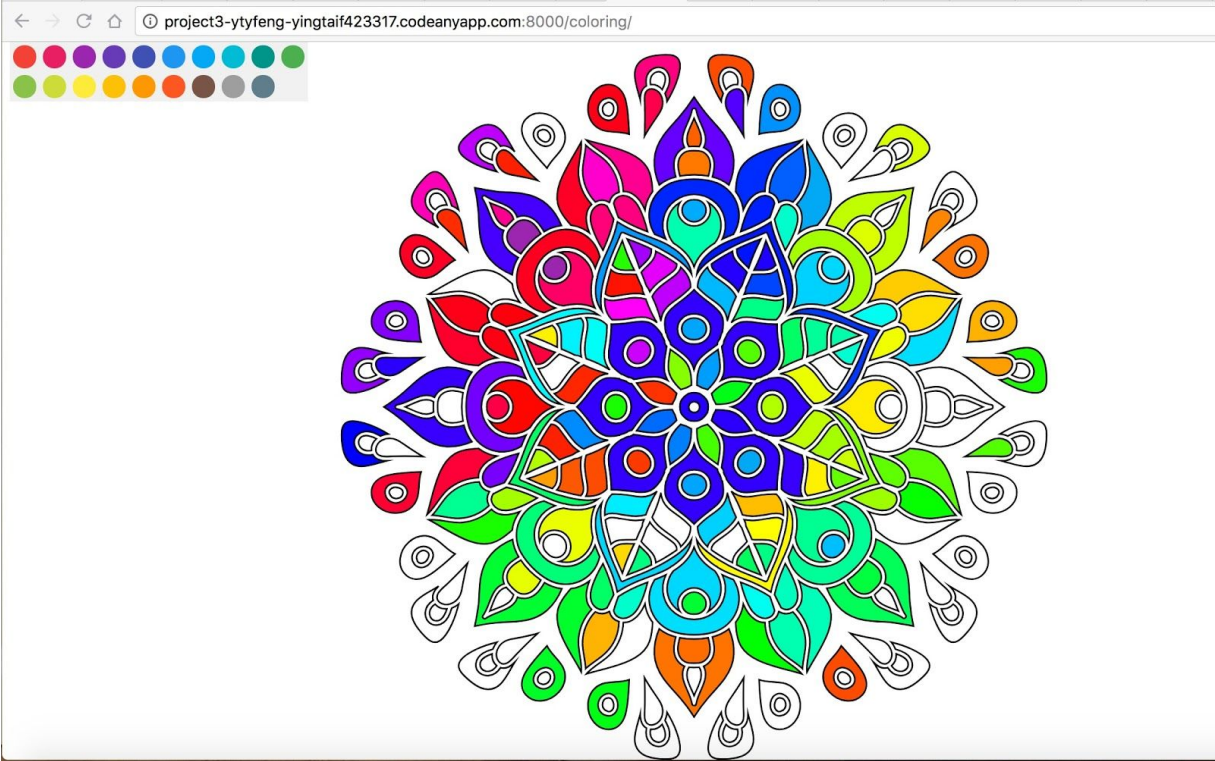
Gradient selector image



The screenshot shows a web browser window with the URL `project3-ytyfeng-yingtaif423317.codeanyapp.com:8000/coloring/?type=gradient`. In the top left corner, there is a color palette with two rows of colored circles. The main content area displays a circular mandala coloring page. A large rectangular gradient selector is overlaid on the center of the mandala, showing a color gradient from purple on the left to red on the right.

Exercise 1a link: https://youtu.be/DMLCviV_DxM

Custom interaction image



Custom Interaction Video link: <https://youtu.be/UNn49oho2dg>

Stochastic Coloring - we designed this app to color randomly when being dragged, while it colors based on the color selected when users click on a specific enclosed space.

Reading and reflection

READING RESPONSE #1

Prompt: Describe how your coloring interaction adheres or does not adhere to *each* of Resnick et al.'s "Design Principles for Tools to Support Creative Thinking". For those that don't adhere, how might a redesign of your interaction better follow that design principle.

Design principles:

- Support exploration.
- Low Threshold, High Ceiling, and Wide Walls.
- Support Many Paths and Many Styles.

Support Collaboration.
Support Open Interchange.
Make It As Simple As Possible - and Maybe Even Simpler.
Choose Black Boxes Carefully.
Invent Things That You Would Want To Use Yourself.
Balance user suggestions, with observation and participatory processes.
Iterate, Iterate - Then Iterate Again.
Design for Designers.
Evaluation of Tools.

Response:

Our interaction somewhat supports exploration - we allow the user to explore via a color palette, but we don't support undoing and the gradient tool could be more self-revealing by having the cursor be changed to something resembling a gradient tool.

It does have a low threshold given how easy it is to use, but there is no high ceiling or wide walls since there are only a limited number of options given the gradient and random coloring interactions.

We support many paths and many styles by allowing the user to choose the gradient colors and the start and end point. Random coloring on the other hand deliberately limits the choices of the user in order to decrease complexity.

We do not support collaboration - the most basic interactions are for solo use. We can try to remedy this by allowing the user to save and then share their image with others quickly and easily.

There is also a lack of open interchange - we simply provide a gradient tool to be used on the square and a method for stochastic coloring.

Our interaction truly embraces the idea of simplicity since stochastic coloring allows coloring to be semi-automatic and users only have to drag their mouse over the desire area.

The black box we chose was the stochastic coloring process -- users do not need to know or control how the random process was done, but all they need to do is to use it by dragging the mouse.

We designed this coloring app also for ourselves because we wanted to make the coloring process less tedious too, and doing so with a stochastic process would help inspire us to think of new and elegant color combinations.

We also took our users into account by conducting in-depth, unstructured observational studies, and we took their feedback seriously, making sure the interaction is highly usable and meets user's needs.

Through the three cycles, we iterated numerous times, and each iteration is based on user feedback.

As for designing for designers, we did not consider this principle as much because we wanted to focus on our average user, who are busy young professionals wanting to express themselves better. Our users have busy lives and would appreciate a simple and less time-consuming coloring interaction. As we meet this user need, we are also inherently reducing the app's ability to suit designers and more advanced users. To better follow this principle, we would need to add advanced options for power users and designers alike.

Evaluation of tools - our tool allows a certain level of creativity to be achieved, but the fact that the mandala is unchangeable and we only offer limited functionalities makes it difficult for us to maintain that our tool is great for facilitating creativity.

Links

Cycle I Doc	https://docs.google.com/document/d/1MFVzM0i5GT5dwIzHTXCyoClrfmT9nv-JgmNAA_kRNBw/edit?usp=sharing
Cycle II Doc	https://docs.google.com/document/d/1IbII6DI0ra6vNyhlp9xu3sn-MORywug-iQc3nzZxydc/edit?usp=sharing
Codeanywhere project	https://codeanywhere.com/s/1/iKC1N5DJvE5UJ7KScpxVoFhosGF5Czc6OXjlDeziHxqFpq5rmorxjV5X7fQWs7XC
Final video	Custom Interaction Video link: https://youtu.be/UNn49oho2dg Gradient selector Video link: https://youtu.be/DMLCviV_DxM
Github	https://github.com/cs160su18/project3-ytyfeng

