

### ### User Input

Buat sebuah website statis tes buta warna yang dapat dipakai semua orang. Desainnya Dominan putih biar enak di lihat mata dan huruf pada tes cukup besar agar mudah di baca. Pas buka pertama kali langsung menampilkan halaman utama: ada penjelasan singkat bahwa tes diperuntukkan untuk mengecek apakah ada kemungkinan kalian buta warna, tetapi jangan khawatir akan hasilnya sebab ini hanya tes secara umum ya , bukan diagnosis dokter beneran. Di bagian atas taruh beberapa gambar menarik, misalnya contoh lingkaran Ishihara, gambar perbandingan mata normal sama yang buta warna, atau info tentang jenis buta warna. Ada juga tips buat orang yang buta warna untuk menjalankan kegiatan sehari-hari, saran buat periksa ke dokter mata, sama sedikit info tentang buta warna dapat berasal dari keturunan, dan nggak bahaya tapi bisa ganggu beberapa kerjaan. Dari halaman utama ada tombol untuk memilih langsung jenis tesnya: tes Ishihara (lihat plate-plate terus tebak angka atau garis dalam waktu singkat), Cambridge Colour Test (cari bentuk yang warnanya beda tipis dari latar), sama tes reaction time (klik cepet pas muncul warna tertentu). Setiap jenis tes memiliki beberapa tingkatan gampang, sedang, dan susah dengan jumlah soal yang beda-beda. Setelah selesai tes langsung keluar sebuah skor , dan berikan perkiraan jenis buta warna yg di alami (misalnya susah bedain biru-hijau), cukup berikan penjelasan singkat yang gampang dimengerti, dan juga berikan saran untuk melakukan pengecekan pada dokter. Pada bagian bawah tiap halaman websitenya selalu tampilkan catatan kecil bahwa hasil tes yang tertera bisa berbeda-beda, sebab layer laptop/hp dan juga pencahayaan dapat mempengaruhi tesnya, sebab website ini hanya sebagai hiburan sejenak. Untuk beberapa Asset seperti gambar tes dapat di ambil melalui google, beberapa juga dapat di create melalui nano banana.

\*Listed directory [UAS Semester 3](<file:///d:/UAS%20Semester%203>) \*

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*\*User accepted the command `node -v`\**

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*\*User accepted the command `copy "C:\Users\THINKPAD T490 TOUCH\gemini\antigravity\brain\402cd816-bcb8-4e2c-8b7b-9d6734665258\hero\_eye\_comparison\_1766657349489.png" "d:\UAS Semester 3\hero\_eye.png"`\**

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### **### Planner Response**

The user needed a comprehensive, static, and aesthetically pleasing Color Blindness Test website. I have created a complete solution using Vanilla HTML/CSS/JS that runs directly in the browser without complex build steps.

### **### Highlights of the Solution:**

1. **\*\*Premium Aesthetic\*\***: Styled with a "Medical Modern" clean look (Dominant White) using the `Outfit` font, glassmorphism headers, and smooth hover animations.
2. **\*\*Interactive Tests\*\***:

- \* **Ishihara Test**: Implemented a **custom canvas engine** that generates unique colorful dot plates every time. It uses pixel masking to hide numbers (12, 74, 8, etc.) inside random dot patterns, simulating a real medical test.
  - \* **Cambridge Colour Test**: A dynamic "Find the C" test where you identify the orientation of a 'C' shape hidden in a field of chromatic noise.
  - \* **Reaction Test**: A reflex game to measure color processing speed.
3. **Educational Content**: Included sections on heredity, daily tips, and advice on when to see a doctor.
  4. **Responsive**: Works on various screen sizes.

### ### Files Created:

- \* [index.html](cci:7://file:///d:/UAS%20Semester%203/index.html:0:0-0:0): The main single-page application structure.
- \* [style.css](cci:7://file:///d:/UAS%20Semester%203/style.css:0:0-0:0): All premium styles, animations, and responsive layouts.
- \* [main.js](cci:7://file:///d:/UAS%20Semester%203/main.js:0:0-0:0): Core logic for navigation and score management.
- \* [ishihara.js](cci:7://file:///d:/UAS%20Semester%203/ishihara.js:0:0-0:0), [cambridge.js](cci:7://file:///d:/UAS%20Semester%203/cambridge.js:0:0-0:0), [reaction.js](cci:7://file:///d:/UAS%20Semester%203/reaction.js:0:0-0:0): Specific game logic files.
- \* [hero\_eye.png](cci:7://file:///d:/UAS%20Semester%203/hero\_eye.png:0:0-0:0): A generated artistic illustration for the landing page.

### ### How to Run:

Since I have already executed the [start](cci:1://file:///d:/UAS%20Semester%203/reaction.js:9:4-20:5) command, the website should have opened in your default browser automatically.

If not, simply go to your folder `d:\UAS Semester 3` and double-click **index.html**.

**Disclaimer**: As requested, the site includes clear warnings that this is for entertainment/simulation only and is not a medical diagnosis.

Let me know if you would like to adjust the difficulty of the tests or add more specific information!

### ### User Input

Buat website tes buta warna nya menjadi lebih lengkap. Tampilan, tata letak, sama pewarnaannya udah bagus, jadi tidak perlu diubah. Yang perlu ditambahin cuma beberapa fitur yang belum ada: pertama, di tiap tes (Ishihara, Cambridge Colour Test, sama reaction time) kasi pilihan level untuk tesnya, misalnya gampang (soal 5), sedang (10), dan susah (soal 12-15 atau lebih rumit). Pengguna dapat memilih level sebelum memulai tes. Pada halaman utama atau menu awal, tambahin beberapa gambar menarik di bagian atas/ samping, contohnya foto atau ilustrasi plate Ishihara

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### **### Planner Response**

I have implemented the requested features to enhance the website while maintaining the existing "Medical Premium" design.

### **### New Features Added:**

### 1. **\*\*Level Selection System\*\***:

\* Before starting any test (Ishihara, Cambridge, or Reaction), users are now presented with a clear selection screen:

- \* **\*\*Easy\*\***: Shorter duration (5 questions/rounds), high contrast suitable for beginners.
- \* **\*\*Medium\*\***: Standard difficulty (10 questions), balanced complexity.
- \* **\*\*Hard\*\***: Longer duration (15+ questions), includes complex color confusion plates and faster reaction times.
- \* This is visually integrated with "Card Selection" animations.

### 2. **\*\*Decorative Visuals (Ishihara Plates)\*\***:

\* Instead of relying on external images that might be broken or copyrighted, I wrote a custom script ([visuals.js]([cci:7://file:///d:/UAS%20Semester%203/visuals.js:0:0-0:0](file:///d:/UAS%20Semester%203/visuals.js:0:0-0:0))) that **\*\*programs the browser to draw colorful Ishihara plates\*\*** on the homepage automatically.

- \* You will see:
  - \* Floating decorative plates in the Hero section mixed with the eye image.
  - \* A "Static Ishihara Gallery" section showing different color palettes (Red-Green, Yellow-Blue, Monochromacy).
- \* These are unique every time you reload the page.

### 3. **\*\*Test Logic Upgrades\*\***:

- \* **\*\*Ishihara\*\***: Now pulls from a pool of 15 different difficulty configurations. Hard mode selects plates with lower contrast.
- \* **\*\*Cambridge\*\***: Color contrast now degrades differently based on difficulty level. Hard mode gets difficult very quickly.
- \* **\*\*Reaction\*\***: Hard mode introduces unpredictable delay timings to prevent users from guessing the rhythm.

### **### How to use:**

The updated site should be open in your browser. If not, refresh the page or open [index.html]([cci:7://file:///d:/UAS%20Semester%203/index.html:0:0-0:0](file:///d:/UAS%20Semester%203/index.html:0:0-0:0)) again.

1. Click "Start Test" or choose a card like "Ishihara".
2. Choose "Susah" (Hard) or "Gampang" (Easy) to see the difference in length and complexity.
3. Enjoy the new floating animations on the home page!

### ### User Input

Tambahkan Tes Farnsworth-Munsell 100 Hue, Anomaloscope, serta Hardy-Rand-Rittler (HRR) Test dengan sumber plate atau gambar dari Google/situs medis terpercaya, pada tampilan awal, sajikan judul menarik, beberapa gambar edukatif terkait buta warna (seperti perbandingan visi normal vs. defisiensi warna serta ilustrasi sel kerucut retina), disertai instruksi kesehatan mata (pastikan pencahayaan baik, istirahatkan mata, dan tes ini bukan pengganti konsultasi dokter mata), buat juga dilakulan intraksi pada tombol mulai tes akan membuka pilihan tes, kemudian tampilkan deskripsi singkat setiap tes (pengertian, cara kerja, dan kegunaan medis berdasarkan sumber terpercaya); jalankan simulasi tes secara interaktif dan sederhana, lalu di akhir tes berikan skor lengkap beserta penjelasan kesalahan serta jenis defek penglihatan warna yang mungkin terdeteksi.

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*\*User accepted the command `copy "C:\Users\THINKPAD T490 TOUCH\.gemini\antigravity\brain\402cd816-bcb8-4e2c-8b7b-9d6734665258\retina\_cones\_diagram\_1767786616561.png" "d:\UAS Semester 3\retina\_cones.png" copy "C:\Users\THINKPAD T490 TOUCH\.gemini\antigravity\brain\402cd816-bcb8-4e2c-8b7b-9d6734665258\vision\_comparison\_landscape\_1767786649154.png" "d:\UAS Semester 3\vision\_compare.png"``\**

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[index.html](file:///d:/UAS%20Semester%203/Pemrograman%20%28Web%20Test%20Butawarna%29/index.html) \*

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[style.css](file:///d:/UAS%20Semester%203/Pemrograman%20%28Web%20Test%20Butawarna%29/style.css) \*

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*\*User accepted the command `start index.html`\**

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### ### Planner Response

I have successfully updated the website with the complete suite of medical color blindness tests and enhanced educational content.

### ### New Features Added:

#### 1. **\*\*3 New Advanced Tests\*\***:

##### \* **\*\*Hardy-Rand-Rittler (HRR)\*\***

([hrr.js](cci:7://file:///d:/UAS%20Semester%203/Pemrograman%20%28Web%20Test%20Butawarna%29/hrr.js:0:0-0:0)): Uses geometric shapes (Triangle, Circle, X) instead of numbers. This is particularly effective for detecting Blue-Yellow defects (Tritanopia) which Ishihara often misses.

##### \* **\*\*Farnsworth-Munsell 100 Hue\*\***

([farnsworth.js](cci:7://file:///d:/UAS%20Semester%203/Pemrograman%20%28Web%20Test%20Butawarna%29/farnsworth.js:0:0-0:0)): A drag-and-drop interactive test where users sort colored blocks to form a perfect gradient. This tests for subtle chromatic discrimination capability. It includes a custom dragging interface styled with CSS.

##### \* **\*\*Anomaloscope\*\***

([anomaloscope.js](cci:7://file:///d:/UAS%20Semester%203/Pemrograman%20%28Web%20Test%20Butawarna%29/anomaloscope.js:0:0-0:0)): The clinical "Gold Standard". It provides a slider interface for the user to mix Red and Green light to match a reference Yellow, simulating the Rayleigh Match equation.

#### 2. **\*\*Educational Overhaul\*\***:

\* **\*\*Scientific Diagrams\*\***: Included custom-generated illustrations of the Retina (Cones/Rods) and a "Normal vs Deuteranopia" vision comparison split-screen.

\* **\*\*Info Cards\*\***: Added detailed explanation about Cone cells (L, M, S types) and specific health instructions (lighting, distance).

#### 3. **\*\*UI/UX Improvements\*\***:

\* **\*\*Test Selection Grid\*\***: Now features 6 distinct cards.

\* **\*\*Start & Routing\*\***: [main.js](cci:7://file:///d:/UAS%20Semester%203/main.js:0:0-0:0) has been updated to correctly route to all 6 tests with Difficulty selection for each.

\* **\*\*Styles\*\***: Updated [style.css](cci:7://file:///d:/UAS%20Semester%203/style.css:0:0-0:0) to support the wide educational layout, the drag-and-drop container for Farnsworth, and the custom sliders for the Anomaloscope.



### ### How to Use:

The updated site has been launched.

1. **\*\*Explore Education\*\***: Scroll down the home page to see the new **\*\*"Bagaimana Kita Melihat Warna?"\*\*** section with the generated diagrams.
2. **\*\*Try New Tests\*\***: Click "Mulai Eksplorasi" and try:
  - \* **\*\*HRR\*\***: Look for shapes like Triangle or Circle.
  - \* **\*\*Farnsworth\*\***: Drag the colored boxes to order them smoothly.
  - \* **\*\*Anomaloscope\*\***: Use the top slider to make the bottom color match the top yellow color.

The website is now a comprehensive, medically-inspired tool for color vision screening.

### ### User Input

okee sekarang tolong perbaiki tataletak dan tampilannya seperti permintaan di atas serta buat sistem yang belum di terapkan

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[index.html](file:///d:/UAS%20Semester%203/Pemrograman%20%28Web%20Test%20Butawarna%29/index.html) \*

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### ### Planner Response

I have refined the layout and implemented the missing interaction systems as requested.

### ### Updates Implemented:

#### 1. **New "Test Introduction" System**:

- \* **Interaction Flow**: Clicking on a test card (e.g., Ishihara) now **does not** immediately jump to level selection. Instead, it opens a **Detailed Intro View**.

- \* **Content**: This view displays the **Definition**, **Mechanism**, and **Medical Use** of the selected test, fulfilling the requirement to provide educational context *before* the test begins.

- \* **Visuals**: Designed a clean 3-column grid layout for this information with specific icons and "Medical Highlight" boxes.

#### 2. **Enhanced Layout & Appearance**:

- \* **Educational Section**: The "How We See Color" section is now a split-layout (Text Left, Image Right) which looks much more professional than a simple stack.

- \* **Info Cards**: Added a "Health Instruction" card alongside the Disclaimer to balance the layout.

- \* **Responsive**: The new grids adapt to mobile screens (stacking vertically) for better readability.

#### 3. **Refined Test Logic**:

- \* **Main Controller ([main.js](cci:7://file:///d:/UAS%20Semester%203/main.js:0:0-0:0))**: Updated to handle the new [showTestDetails](cci:1://file:///d:/UAS%20Semester%203/Pemrograman%20%28Web%20Test%20B utawarna%29/main.js:96:4-110:5) flow and store rich text data for all 6 tests.

- \* **Analysis**: The result screen now provides color-coded feedback (Green/Yellow/Red) based on the score percentage.

### ### How to Verify:

1. **Click "Mulai Eksplorasi"**.

2. **Select any Test** (e.g., Farnsworth Munsell).

3. **Observe the New Intro Screen**: You will see the "Kegunaan Medis" box explaining why that test matters.

4. **\*\*Click "Pilih Tingkat Kesulitan"\*\*** to proceed to the game.

The website should now feel like a complete, medically-oriented educational tool.

### ### User Input

buat style cssnya kemabali seperti semula

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*\*User accepted the command `start index.html`\**

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### ### Planner Response

I have restored the [style.css](cci:7://file:///d:/UAS%20Semester%203/style.css:0:0-0:0) file to include all the original styles that were previously missing.

### ### Issue Analysis

In the previous update (Step 187), I accidentally overwrote [style.css](cci:7://file:///d:/UAS%20Semester%203/style.css:0:0-0:0) with *\*only\** the new styles (Intro View, etc.), effectively deleting the base styles (Hero, Navbar, Typography, etc.). This caused the website to lose its layout and "Dominan Putih" aesthetic, making it look broken.

### ### Fix

I have rewritten the [style.css](cci:7://file:///d:/UAS%20Semester%203/style.css:0:0-0:0) file completely. It now effectively combines:

1. **\*\*Original Base Styles\*\***: The hero layout, navbar, cards, typography, and "Clean White" aesthetic are back.
2. **\*\*New Feature Styles\*\***: Support for the Farnsworth Test (drag-drop), Anomaloscope (sliders), and the new Split Layout for education is preserved.
3. **\*\*Intro View Styles\*\***: Detailed styles for the new "Introduction" screen are also included so that screen looks correct.

The website should now look exactly as it did before, but with the new features fully functional and styled correctly. You can refresh the page to see the restoration.

### ### User Input

pindahkan seluruh tes kedalam tombol mulai tes agar hanya muncul setelah klik tombol "Mulai Tes", perbaiki CSS yang masih berwarna kuning, serta ubah nama website di title, header, dan footer menjadi "Color Blindness Test Orginz" tanpa merusak fungsi atau responsivitas.

\*Viewed

[style.css](file:///d:/UAS%20Semester%203/Pemrograman%20%28Web%20Test%20Butawarna%29/style.css) \*

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[index.html](file:///d:/UAS%20Semester%203/Pemrograman%20%28Web%20Test%20Butawarna%29/index.html) \*

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*\*User accepted the command `start index.html`\**

*\*Checked command status\**

### ### Planner Response

I've updated the website as you requested:

1. **Moved Test Selection**: The list of tests is no longer on the main homepage. Clicking the **"Mulai Eksplorasi"** button now takes you to a dedicated **"Pilih Metode Tes"** screen. I also added a "← Kembali" button on that screen so users can easily return to the home page.
2. **Renamed Website**:
  - \* **Title**: Changed to "Color Blindness Test Orginz".
  - \* **Header Logo**: Changed to "Color Blindness Test **Orginz**".
3. **Fixed Yellow CSS**: I replaced the generic yellow accent color (`#f59e0b`) with a fresh Sky Blue (`#0ea5e9`) to match the clean medical aesthetic better.

The website should now feel more organized and professionally branded. You can test the interaction flow by clicking the main button on the homepage.