LIMITLESS

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THE IDEA 01

Our Vision and Its Implementation

OUR VISION

Our vision is to indulge the user in an experience to discover the universe and learn about exoplanets and blackholes with an insight into its **Endless Possibilities.**

THE IMPLEMENTATION

We decided to create a website using **HTML**, **CSS**, **JavaScript** and **Python** to provide a cross-platform, easily accessible experience to all users while also being easy to deploy. The website also relies on data provided by NASA APIs

02 PROJECT DESCRIPTION

A brief description of the website and its features

PROJECT DESCRIPTION

The project consists of 5 webpages which enable the users to explore the vast expanse of the universe all the way from our neighboring planet Mars to the Black holes that at the center of our galaxy.

1. **THE HOME PAGE:**
   The home page welcomes the user to the site with a navigation bar to access the other parts of the website and a realistic parallax background to capture the user's interest followed by a brief description of our universe.

2. **ASTRONOMICAL PICTURE OF THE DAY:**
   This page displays an astronomical picture from NASA's "APOD" Image API and provides a caption which describes it. The image is displayed using a card with an animation to reveal the caption on hover.

PROJECT DESCRIPTION

3. **EXPLORE MARS:**
   A page which allows the user to view the surface of Mars through the eyes of the NASA Curiosity Rover by using the “Mars Rover Photos” API.

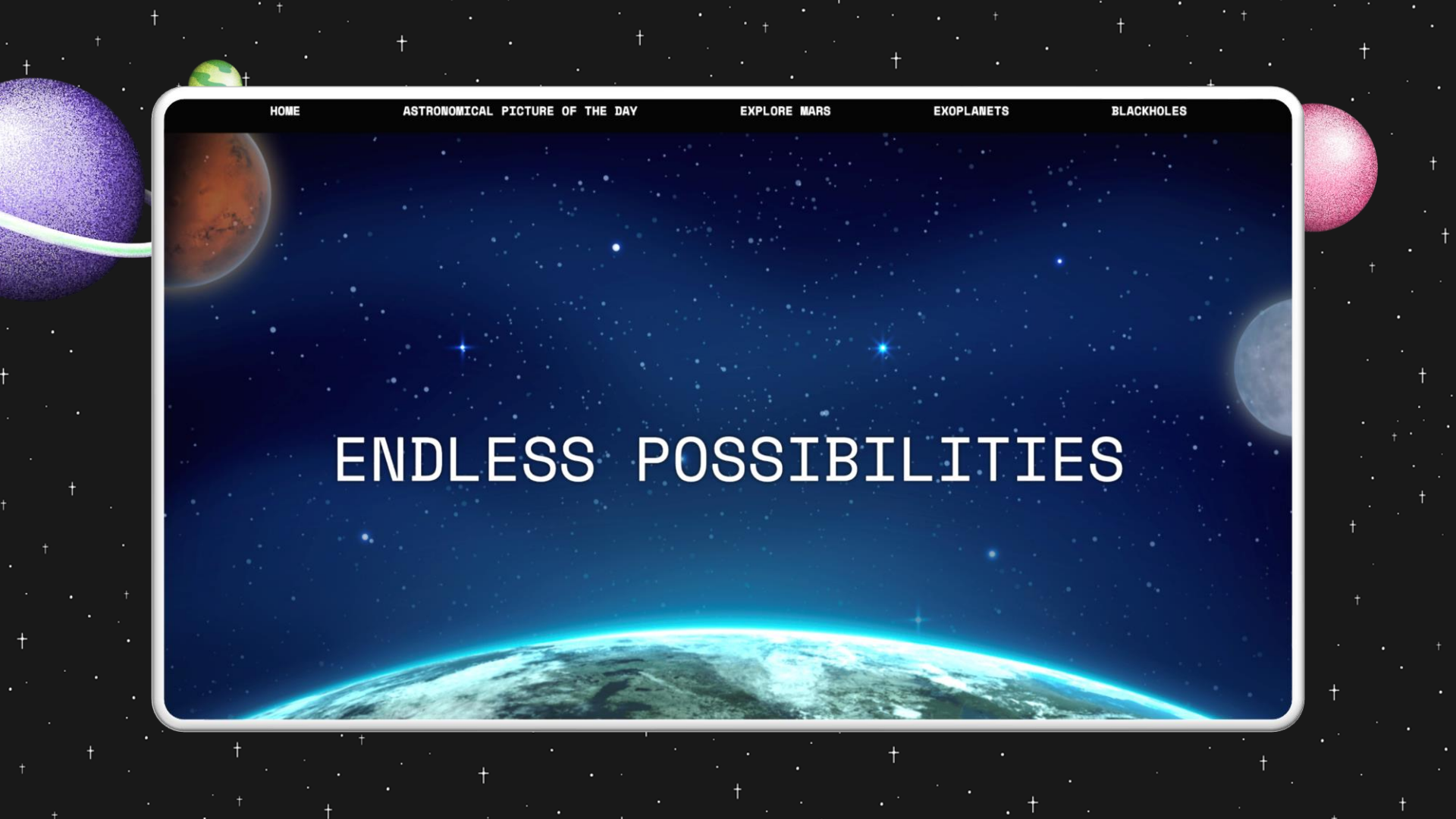
4. **EXOPLANETS:**
   An informative page which sheds light on astonishing discoveries about the planets that orbit stars outside our solar system.

5. **BLACKHOLES:**
   This webpage provides information about the various fascinating features of a black hole and about the black hole at the center of our milky way galaxy.

THE PROJECT

Images of the project

03


HOME
ASTRONOMICAL PICTURE OF THE DAY
EXPLORE MARS
EXOPLANETS
BLACKHOLES
ENDLESS POSSIBILITIES

PLANET EARTH FROM ORION

A Space Launch System rocket left planet Earth on Wednesday, November 16 at 1:47am EST carrying the Orion spacecraft on the Artemis 1 mission, the first integrated test of NASA's deep space exploration systems. Over an hour after liftoff from Kennedy Space Center's

CURIOSITY ROVER

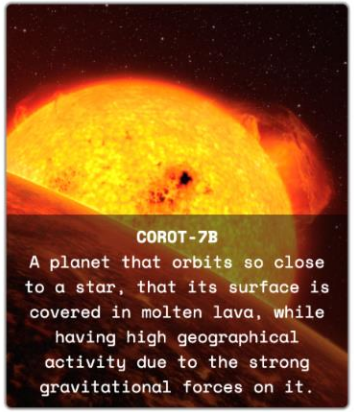
Curiosity is a car-sized Mars rover designed to explore the Gale crater on Mars as part of NASA's Mars Science Laboratory mission. Curiosity was launched from Cape Canaveral on 26 November 2011 and landed on Mars on 6 August 2012, In December 2012, Curiosity's two-year mission was extended indefinitely, and on 5 August 2017, NASA celebrated the fifth anniversary of the Curiosity rover landing. On 6 August 2022, a detailed overview of accomplishments by the Curiosity rover for the last ten years was reported. The rover is still operational, and as of These Day, Curiosity has been active on Mars for 10 years since its landing.

These images were taken by the rover on 2022-11-16

Exoplanets are planets that exist beyond our own solar system. Most exoplanets orbit other stars but some, called "Rogue Planets", orbit the center of the galaxy of which they're a part and do not orbit any star.

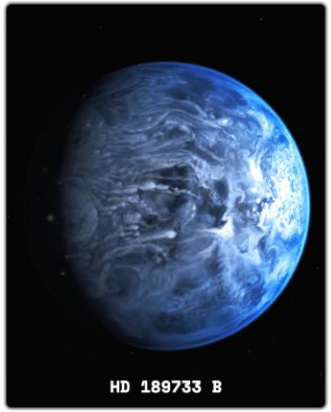
They are fascinating for several reasons! There are some exoplanets that are similar to earth and could even host extraterrestrial life, some that have glass rain, and even some whoose surface is covered in molten lava. The possibilities are endless. (Hover over the images to read more about them)

KEPLER-453B

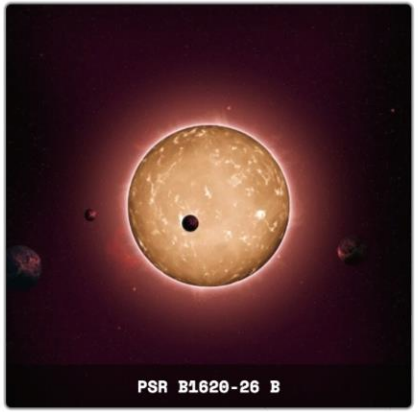


COROT-7B

A planet that orbits so close to a star, that its surface is covered in molten lava, while having high geographical activity due to the strong gravitational forces on it.



HD 189733 B



PSR B1620-26 B

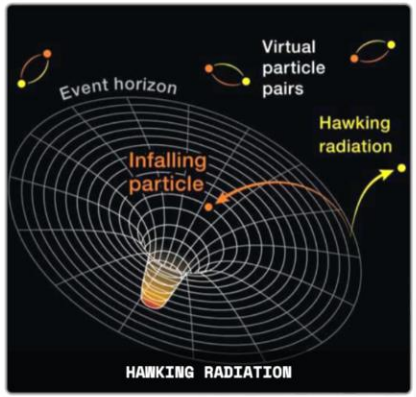
Exoplanets have become an important area of astrophysics in the last two decades. Important methods used to detect exoplanets are direct imaging, astrometry, radial velocity, transit event observation, and microlensing. Scientists are actively working on the project

SAGITTARIUS A.

Black holes are the remanants of super massive stars that die in a supernova explosion. They are infinitely dense at their center and they have a gravitational force of attraction that prevents all particles and even light from escaping it! Black holes can generally found at the center of galaxies. Our own galaxy, the Milky Way, orbits a supermassive black hole called Sagittarius A. The presence of a black hole is detected by its effect on surrounding stars. However in 2019 scientists captured the first ever picture of a black hole! Some effects of a blackhole are given below!

ACCRETION

TIME DIALATION



HAWKING RADIATION

04 CITED SOURCES AND CREDITS

Our sources of information and assets

- https://exoplanets.nasa.gov/what-is-an-exoplanet/overview/
  Opening Text

- https://en.wikipedia.org/wiki/Kepler-452b
  Kepler-453b Text

- https://c4.wallpaperflare.com/wallpaper/66/811/717/5c1cb70ccd8df-wallpaper-preview.jpg
  Kepler-453b Image

- https://en.wikipedia.org/wiki/Lava_planet
  Corot 7b Text

- https://upload.wikimedia.org/wikipedia/commons/9/93/Artist%E2%80%99s_impression_of_Corot-7b.jpg
  Corot 7b Image

- https://www.space.com/22614-blue-alien-planet-glass-rain.html
  HD 189733 B Text

- http://www.nasa.gov/sites/default/files/thumbnails/image/heic1312a.jpg
  HD 189733 B Image

- https://en.wikipedia.org/wiki/PSR_B1620%E2%88%9226_b
  PSR B1620-26 B Text

- https://cns.utexas.edu/images/easyblog_shared/2015/a1sx2_Thumbnail1_Kepler444_lllo-1400.jpg
  PSR B1620-26 B Image

- https://www.newscientist.com/article/mg23130884-100-proxima-b-closest-earth-like-planet-discovered-right-next-door/
  Alpha Centauri Cb Text

- https://static.scientificamerican.com/sciam/cache/file/50793D25-E48F-4DCB-B2944B4A8C9DE10B_source.jpg88
  Alpha Centauri Cb Image

- https://en.wikipedia.org/wiki/Curiosity_(rover)
  Information about the Curiosity Rover

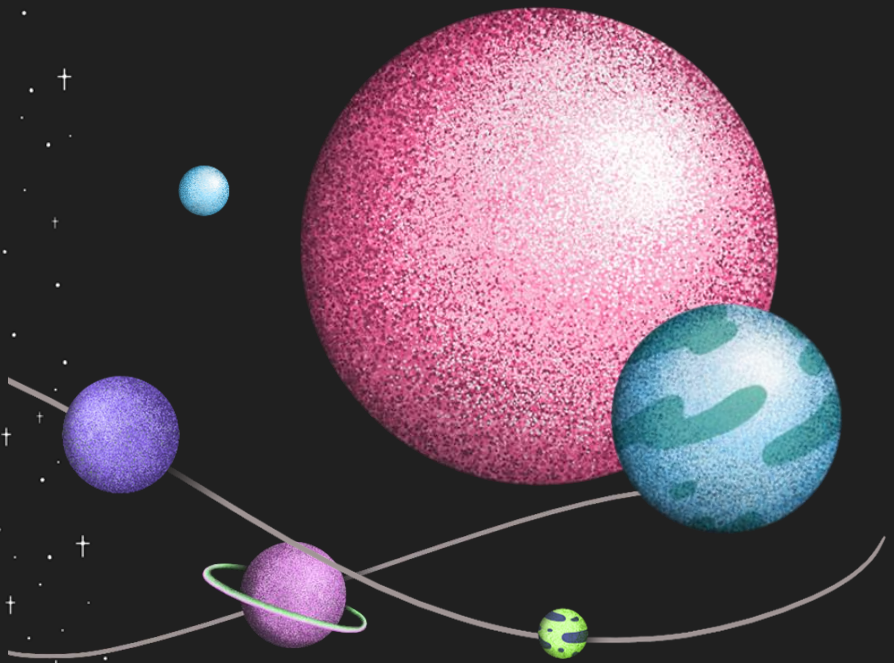
- https://en.wikipedia.org/wiki/Black_hole
  Black hole text inspiration and Sagittarius A. Image

- https://st2.depositphotos.com/1006542/9370/i/950/depositphotos_93703810-stock-photo-vintage-clock-in-space.jpg
  Clock in Space Image

- https://miro.medium.com/max/600/1*oNTxlMD3CHDq-zd9S_ev8w.jpeg
  Hawking Radiation Image

- https://i.stack.imgur.com/lKj6w.jpg
  Accretion Disk Image

- https://www.science.org/doi/10.1126/science.1105746
  Accretion Information



THANK YOU!