

Howler – MoonWalker

Dhruv S., Sharat K., Jay P., Muhammad M.



Information Provided on App

01



This app will ensure that astronauts are up to date on any conditions on the planet Howler, like weather, average temperatures, etc.

02



With all the information of the planet, this app will also ensure that the astronauts are getting enough exercise to try to avoid bone deterioration and kidney stones. Meditation can improve mental health.

03



Doing exercise is not enough for a healthy body, but having a healthy diet can help with the physical health of the astronauts

04



To collect data from Howler and present it on the app, like statistical data

The background is a deep navy blue space scene. It is populated with numerous small, light blue stars and cross-shaped constellations. Two prominent spiral galaxies are visible: one in the top-left corner and another in the bottom-right corner, both rendered in shades of blue and yellow. Several bright yellow shooting stars with long, thin tails are scattered across the scene, including one in the top-right, one in the middle-left, and one in the bottom-left.

Fact!



Did you know that astronauts can not stay in space for really long otherwise their bones start to deteriorate and they can possible develop kidney stones. This is due to the microgravity in space.



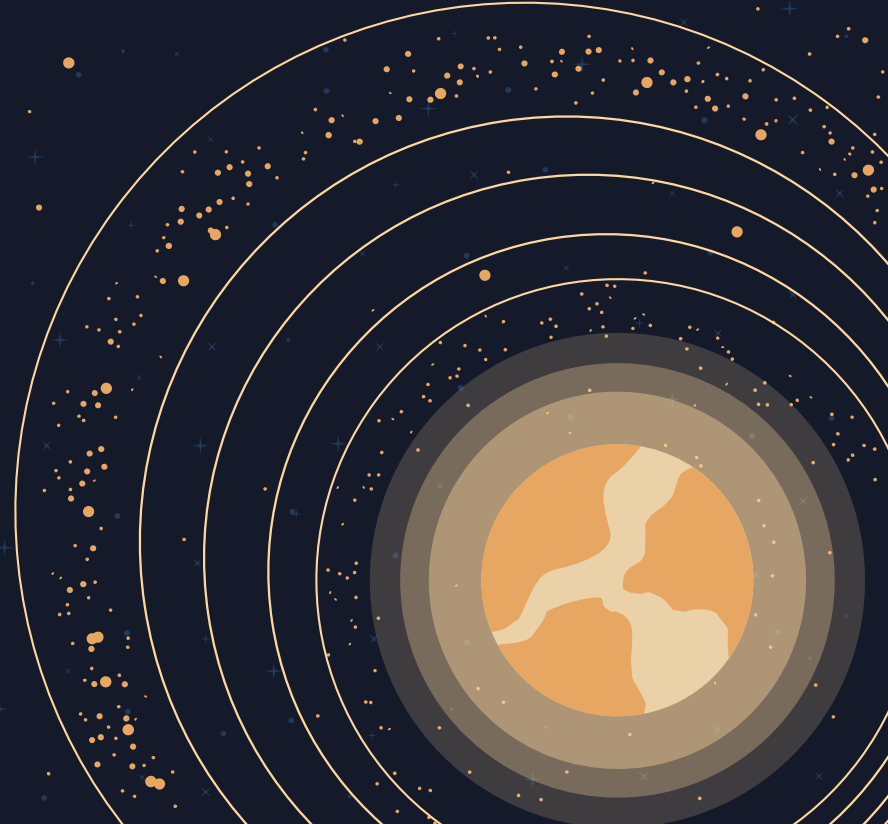
01

App Details

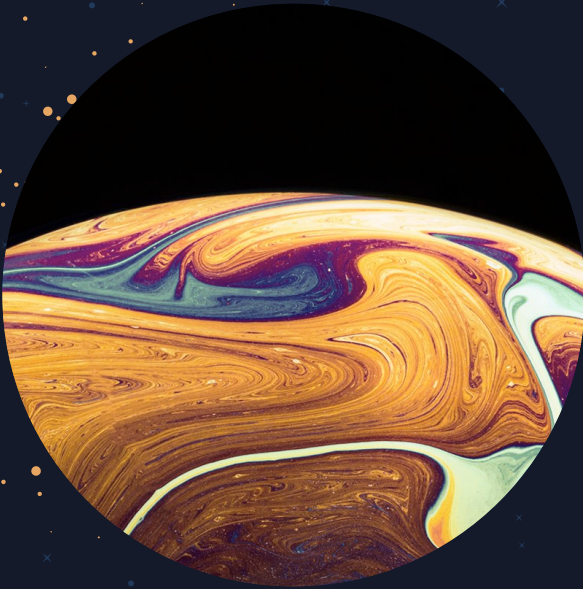
Weather Conditions

Advantages of knowing weather conditions:

- Can prepare the astronaut for any worsening conditions
- Can prevent any damage to structure as the astronaut will know beforehand when to cover the equipment
- This can decide how much sunlight plants will need



Average Temperature



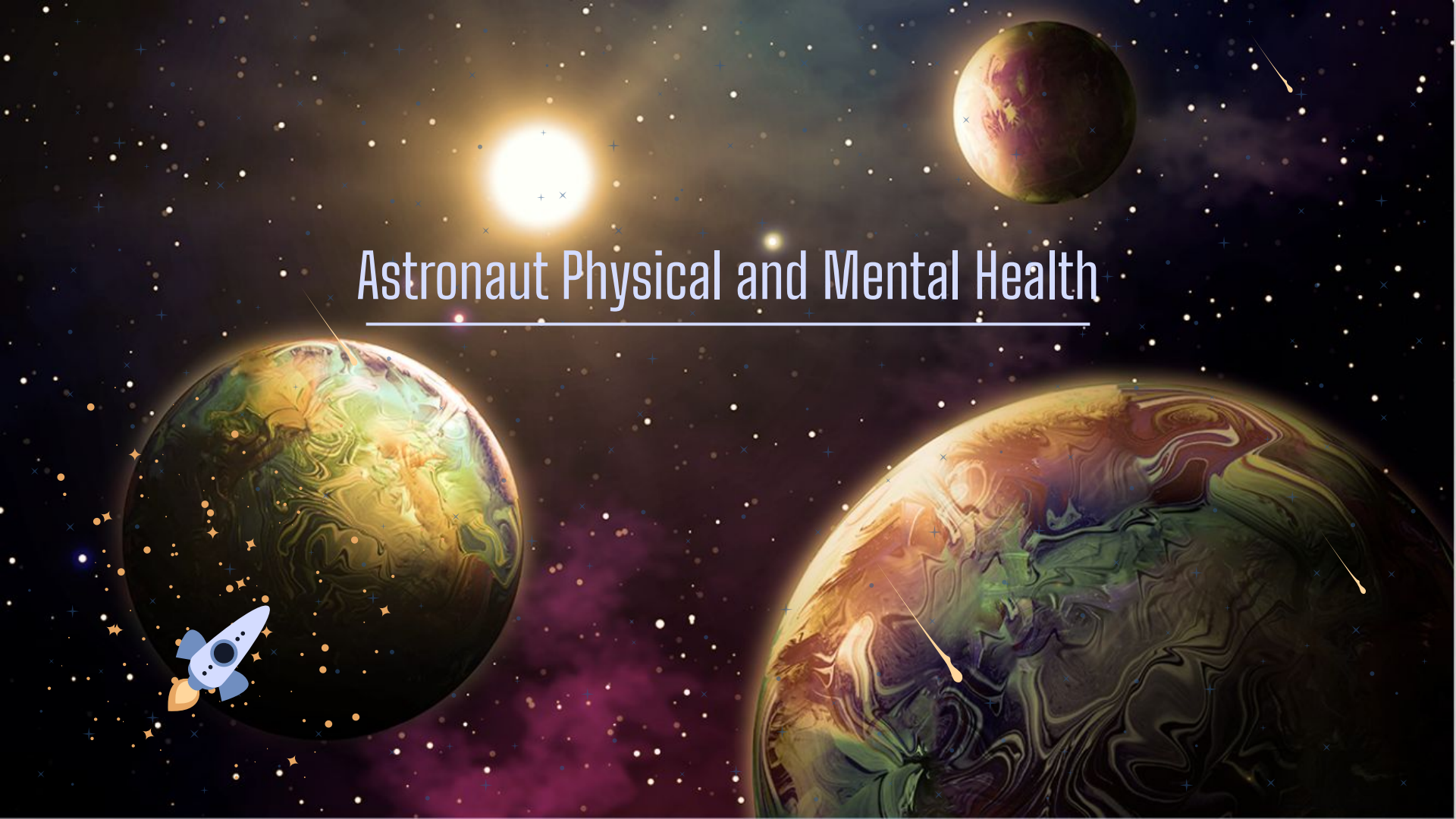
- Average temperature for the day on Howler.
- This ensures that the astronaut knows what humidity or drop in temperature to expect



-25°C - 25°C

Average
temperature
fluctuations





Astronaut Physical and Mental Health



Physical and Mental Health

Physical

Biggest challenge as an astronaut is to get enough exercise so the bones do not deteriorate really fast.

Mental

Having a strong mental health can promote wellbeing by doing meditation and relieving stress

Nutrition

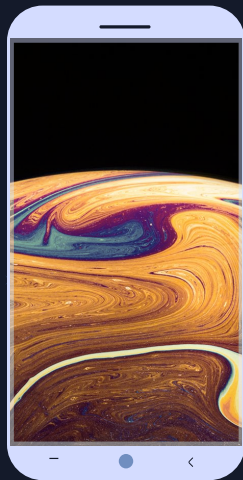


Having good nutrition can ensure good health. The plant facts and nutritional values will also be provided in the app.

Good nutritional foods can ensure that the astronaut can follow a balanced diet with enough carbohydrates, protein and fats.

02

App Design



App Construction

01

How the app
was coded and
its application

02

Structure of
device and how
the astronauts
can work with it

03

App design and
features



Design Concept

Prototype Concept



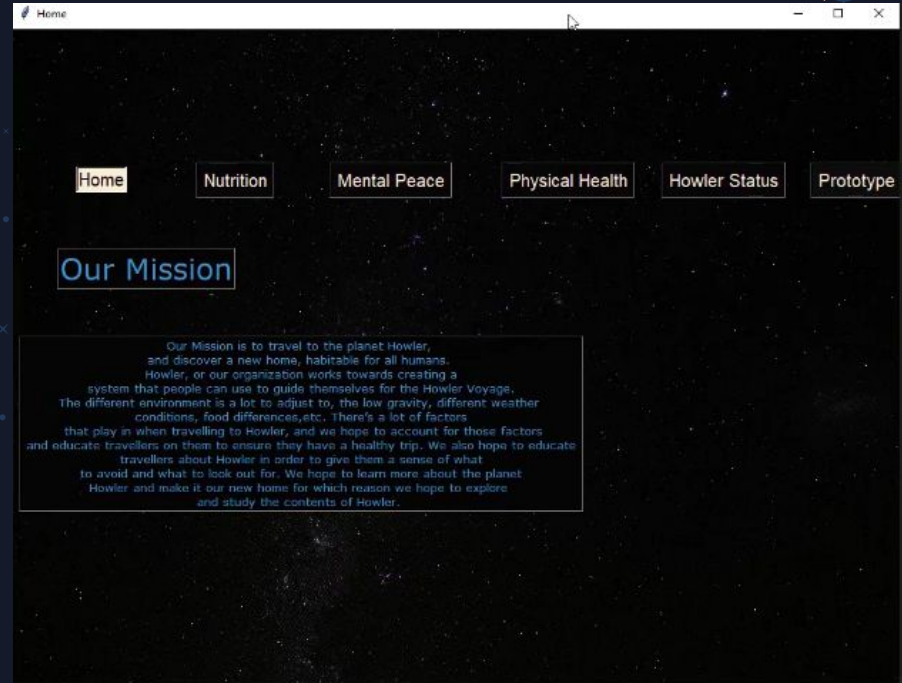
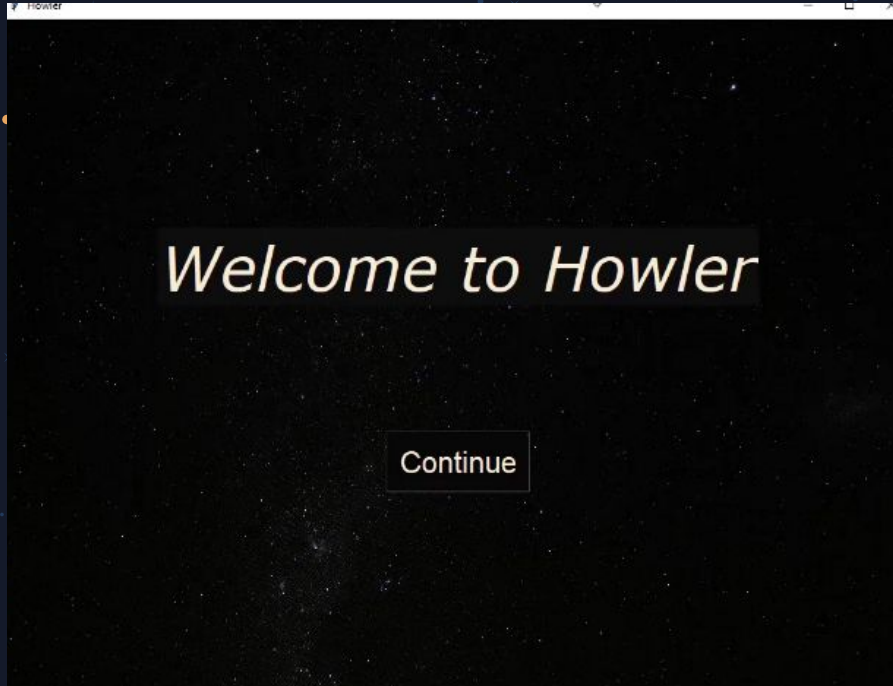
Our Prototype is called Moonwriter, which is a small portable device that can be carried around. This device is compatible with the Hovler Software. The Moonwriter serves the purpose of being a mobile essential tool during the travel to Hovler and residence at Hovler. This tool is an essential guideline which will help with survival and provide prior knowledge before getting to Hovler.

This is the prototype of this app to be used on, a raspberry pi is being used along with a display touch screen. Above image is from the app.

App Walkthrough



Home Page Walkthrough





Physical and Mental Page Walkthrough

Home

Physical Health

LEGS
Muscles involved: Hamstrings, Glutes, Calves

WORKOUT
Squats: 3x10
W/Lunges: 3x10
Calf Raises: 3x10
Heel/Leg Box Squats: 3x10
Rest: 30-90 sec

TRUNK CORE
Muscles involved: Abdominal, Neck, Obliques

WORKOUT
Planks: 4x50 sec
Push Ups: 2 Sets Until
Diciest Push Ups:
2 Sets Until Failure
Jumping Jacks: 4x60 sec
Mountain Climbers: 3x15
Sit Ups: 3x 40 sec
Rest: 30-45 sec

BACK
Muscles involved: Interspersed, Trapezius, obliques, Erector spinae

WORKOUT
Deadlifts: 3x10 sec
Bent Over Rows: 3x10 sec
Biceps: 3x10
Towel pullups: 3x10
Rest: 30-90 sec

ARM
Muscles involved: Biceps brachii, triceps brachii, Deltoids

WORKOUT
Arm Circles: 3x10 sec
Chair Thrust Dip: 4x15
Side plank: 3x45 sec
Push ups: 3 sets until failure
Biceps: 3x15
Rest 30-60 sec

Home

Mental Peace

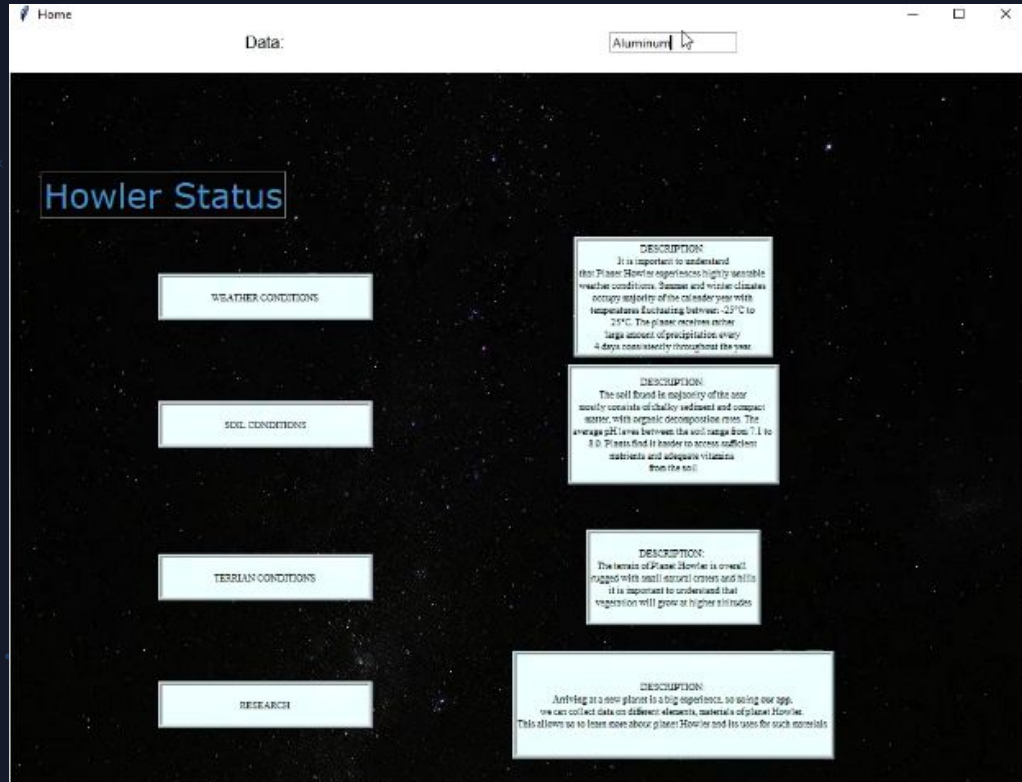
Have a Conversation with a fellow Astronaut
or call someone close to you (Keep in touch).
Expressing your feelings and conversing
with someone can help you feel better.

Stay Active, Exercise, Take a Break, Meditate
Eat well, Drink water, Entertain yourself

Our Organization wants everyone to be happy and
living in peace. That's why we want to host various events and celebrations for
travellers to come together as a community and converse.
We hope to host counselling sessions where the travellers
can have one on one counselling sessions to talk
about any problems or issues. This allows travellers to live with a
with a peace of mind while travelling to a whole new world.

Relax, take a bath, write a journal, track achievement and daily life.
Sleep plenty

Howler Status Page Walkthrough



The screenshot shows a web browser window with a dark, starry background. The browser's address bar shows 'Home' and the page title is 'Data:'. A search bar in the top right contains the text 'Aluminum'. The main content area features a large 'Howler Status' title on the left. To its right are four white boxes, each containing a 'DESCRIPTION' section. The first box on the left is labeled 'WEATHER CONDITIONS', the second 'SOIL CONDITIONS', the third 'TERRIAN CONDITIONS', and the fourth 'RESEARCH'. The descriptions provide details about the planet's weather, soil, terrain, and the research being conducted.

Home Data: Aluminum

Howler Status

WEATHER CONDITIONS

DESCRIPTION
It is important to understand that Planet Howler experiences highly variable weather conditions. Summer and winter climates occupy majority of the calendar year with temperatures fluctuating between -25°C to 25°C. The planet receives either large amount of precipitation every 4 days non-regularly throughout the year.

SOIL CONDITIONS

DESCRIPTION
The soil found in majority of the area mostly consists of chalky sediment and compact matter with organic decomposition rates. The average pH levels between the soil range from 7.1 to 8.0. Please find it harder to access sufficient nutrients and adequate vitamins from the soil.

TERRIAN CONDITIONS

DESCRIPTION
The terrain of Planet Howler is overall rugged with small natural craters and hills. It is important to understand that vegetation will grow at higher altitudes.

RESEARCH

DESCRIPTION
Arriving at a new planet is a big experience, so using our app, we can collect data on different elements, materials of planet Howler. This allows us to learn more about planet Howler and its uses for such materials.

Nutritional Page Walkthrough



Home

Nutrition

TOMATOES

It is usually grown in warm weather so they must be grown during the summer months in Florida. The tomatoes need 6-8 hours of sunlight per day with rain occurring every 4 days allowing for somewhat dry weather. The soil has a pH of 7.1 to 8 and tomatoes can grow in a pH of 7.5. They take 50-60 days to grow.

ASPARAGUS

Asparagus can tolerate major weather changes and can handle both extreme heat and cold. This is perfect for the extreme weather conditions in Florida. Asparagus thrives in full sun, when it gets more than 8 hours of sunlight per day, perfect for Florida's environment. Asparagus also can grow in soil with a pH of 7.5.

SPINACH

Spinach best grow in sunny areas so can be grown on Florida during the summer months in moist conditions. Spinach best requires more than 5 hours of sunlight a day. Shifting the average sunlight requirement, it grows in soil with a pH than 7 for higher elevation doesn't affect the plant and it grows in chalky soil. Another perfect vegetable to grow when inhabiting Florida.

CABBAGE

Cabbage usually requires full sunlight, indicating it requires that it can be grown in higher elevations. It grows in soil with acidic pH soil level can be taken into consideration when trying to plant the cabbage. It usually grows in 24° C which is perfect for Florida.

NUTRITIONAL VALUES

Calories: 18
Water: 95%
Protein: 0.8 grams
Carbs: 3.0 grams
Fiber: 1.3 grams
Fat: 0.2 grams
Serving: 100g

NUTRITIONAL VALUES

Calories: 30
Water: 94%
Protein: 2.3 grams
Carbs: 3.0 grams
Fiber: 1.4 grams
Fat: 0.2 grams
Serving: 100g

NUTRITIONAL VALUES

Calories: 18
Water: 95%
Protein: 0.8 grams
Carbs: 3.0 grams
Fiber: 1.3 grams
Fat: 0.2 grams
Serving: 100g

NUTRITIONAL VALUES

Calories: 25
Water: 92%
Protein: 1.3 grams
Carbs: 6.0 grams
Fiber: 2.1 grams
Fat: 0.1 grams
Serving: 100g

Our App Coding Team



Sharat Krishnan

App Coder and Designer



Jay Patel

App Coder and
Information Manager

Our Research and Designing Team



Dhruv Sharma

Presentation Designer,
CAD and Prototype
Designer



Muhammad Moizz

Information Manager
and Designer

Resources

- <https://www.almanac.com/plant-ph>
- <https://www.menshealth.com/fitness/a19545838/10-best-back-exercises/>
- <https://www.runtastic.com/blog/en/6-helpful-bodyweight-exercises-for-a-strong-back/>
- <https://gardening.which.co.uk/hc/en-gb/articles/214015225-How-to-succeed-on-chalky-soil#:~:text=Q%20Which%20plants%20will%20do%20well%20on%20chalky%20soils%3F&text=Spinach%20beet%2C%20sweetcorn%20and%20cabbage, but%20avoid%20celery%20or%20marrows.&text=Shallow%2C%20nutrient%2Dpoor%20chalk%20soil,naturally%20grow%20on%20these%20soils.>
- <https://gilmour.com/drought-tolerant-vegetable-garden>
- <https://www.rhs.org.uk/advice/profile?pid=763>
- <https://www.thespruce.com/root-vegetables-1403506>
-





Thank You!

Do you have any questions?
Feel free to ask

