# **Member 1:**

My name is Name\_1 and i will be explaining the Central nervous system

The central nervous system consists of the brain and spinal cord. It is responsible for processing sensory information, coordinating movement, and enabling higher cognitive functions like thought, memory, and decision-making.

The human eye is considered part of the central nervous system (CNS) because it develops from neural tissue during embryonic development.

The retina, which is the light-sensitive layer at the back of the eye, originates from the optic nerve, which is an extension of the brain. This connection allows the eye to process visual information and transmit it to the brain for interpretation.

# **Member 2:**

My name is Name\_2 and i will be explaining the Eye’s biconvex lens

The eye's lens is a transparent, biconvex structure located behind the iris and the pupil.

Its primary function is to focus light onto the retina, allowing us to see clearly.

For an eye, in order to see the objects at hand, the light rays coming from the objects have to bend more sharply in order to bring them on to the focus of the retina.

The light rays coming from a distant object require less refraction.

**Explain using** : <https://ophysics.com/l16.html>

(Both member 2 and 3 will use same link)

# **Member 3:**

My name is Name\_3 and i will be explaining common types of defects in eye

1. **Myopia (Nearsightedness):**

In myopia, distant objects appear blurry while close objects can be seen clearly. This occurs when the eyeball is too long or the cornea has too much curvature, causing light rays to focus in front of the retina.

To correct this, concave (minus) lenses in glasses or contact lenses is used, which help diverge light rays before they enter the eye.

1. **Hyperopia (Farsightedness):**

In hyperopia, nearby objects appear blurry, while distant objects can be seen more clearly. This defect occurs when the eyeball is too short or the cornea is too flat, causing light rays to focus behind the retina.

To correct this, convex (plus) lenses in glasses or contact lenses, which help converge light rays before they enter the eye.

# **Member 4:**

My name is Name\_3 and i will be explaining what happens in Rods and Cones of Eye

In our eyes we have two types of receptors: rods and cones.

The difference between rods and cones are as follows:

1. Rods cannot detect wavelengths of light VIBGYOR whereas Cones can detect them
2. Hence, Rods can only perceive images in Black and White whereas Cones can perceive colored images
3. That's why Rods help in night vision whereas Cones help in colored vision.

# **Member 5: (rishav)**

My name is Name\_4 and i will be explaining signal transmission in the eye

If we look at the structure, we have Photoreceptor cells : Rods and Cones which detect light and pass light signals to brain through

Bipolar cell where light signals convert to electric signals and then

Those signals pass onto Ganglion cell which produce action potential to allow traversal of signals from optic nerve to brain where visual info is processed

Here,the ganglion cell’s purpose is to check if the signal’s voltage is greater than the threshold value.

Only then it will allow signals to pass onto the brain.

# **Member 6:**

My name is Name\_5 and i will be explaining what happens in optical nerves and correction of image in eye