

# Matrix Group

## Presentation Assignment

**Presenter:** Debasish Sahoo  
**Date:** November 27, 2025  
**Duration:** 30 minutes

### Presentation Instructions

- The presentation contains 20 points. It is divided into three parts. The content contains 12 marks, whereas the presentation and the question answer contain 6 marks.
- The time limit is strict. You may take at most 5 minutes extra. So, in any case, try to wrap up your talk by 35 minutes.

### Presentation Topic

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#### Matrix group are manifolds

The goal is to show that any matrix group is a smooth manifold.

#### Problem

1. Show that any matrix group  $G$  is a smooth manifold.

*Good luck with your presentation! If you have any questions, please don't hesitate to reach out.*