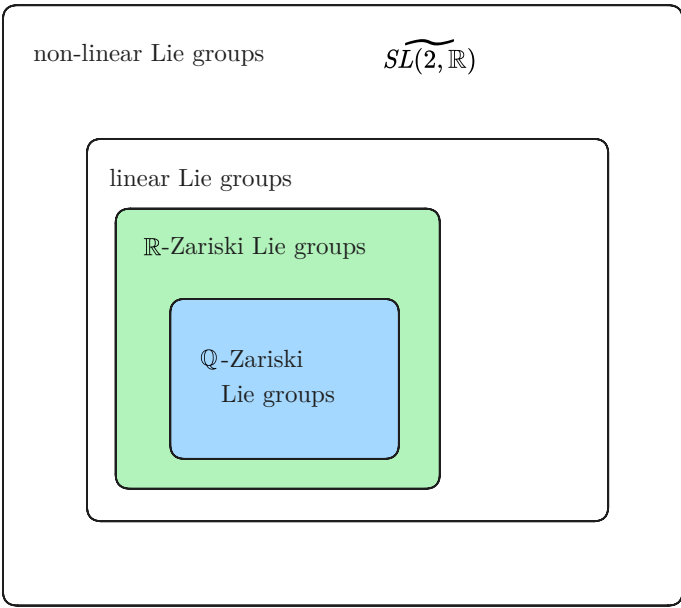


This note, that [was found here](#), as a part of [a collection](#) is written (completely with human hands) by [Rupadarshi Ray](#), was created on November 6, 2023 4:35:31 PM, was last modified on January 24, 2026 6:45:38 PM, and was exported on September 7, 2026 3:31:15 PM.

Lie groups

Definition. Lie group

A group object in **Man**.



Current note has 18 direct children and 26 total descendants.

- [structures based on sets](#)
 - [manifolds](#)
 - [R-manifold_group_\(Lie_groups\)](#)
 - [Adjoint representation of a Lie group](#)
 - [Ad*_orbits are symplectic manifolds](#)
 - [Adjoint group of a Lie group](#)
 - [Conjugation action of a Lie group on itself](#)
 - [Classification of Lie groups](#)
 - [2 dimensional Lie groups](#)
 - [Compact Lie groups](#)
 - [Connected Lie groups with discrete center](#)
 - [Connected Lie groups with non-surjective exponential map](#)
 - [Discrete subgroups of Lie groups](#)
 - [Discrete normal subgroups of Lie groups](#)
 - [Smooth maps onto a Lie group](#)
 - [Lie groups with surjective exponential map](#)
 - [Maurer-Cartan form](#)
 - [Left-invariant Lagrangian on a Lie group](#)
 - [Lie algebra of a lie group](#)
 - [Exponential map from lie algebra of a lie group](#)
 - [Left-invariant vector fields](#)
 - [Bi-invariant metrics on Lie groups](#)
 - [Left invariant Riemannian metric on a Lie group](#)
 - [Geodesic flows on left-Riemannian Lie groups](#)
 - [Semi-simple R-Lie groups](#)
 - [Semi-simple R-Lie groups of dimension 6](#)
 - [Almost simple groups](#)
 - [Virtual subgroups of Lie groups](#)
 - [Lie_group with dilations](#)

And it has 20 siblings.

- [structures based on sets](#)
 - [manifolds](#)
 - [Closed aspherical manifolds](#)
 - [C-manifold](#)
 - [Hermitian manifolds](#)
 - [Kahler manifolds](#)
 - [Kahler manifolds of complex dimension 2, AKA Kahler surfaces](#)
 - [smooth R-manifold](#)
 - [Principal bundles over smooth manifolds](#)
 - [Manifold with a flow](#)
 - [R-manifold_group_\(Lie_groups\)](#)
 - [Homogeneous manifold](#)
 - [Finsler manifold](#)
 - [R-manifold semi-Riemannian](#)
 - [Sub-Riemannian manifolds](#)
 - [R-manifold Poisson](#)
 - [R-manifold symplectic](#)
 - [Multisymplectic manifolds](#)
 - [Spin R-manifold](#)
 - [R-manifold topological](#)

- [Toric manifolds](#)
- [Manifolds with compatible triples](#)