

# Formation of Molecules

**Talk to a Teacher**

<http://spoken-tutorial.org>

**National Mission on Education through ICT**

<http://sakshat.ac.in>

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# Learning Objectives



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# System Requirement



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- **GChemPaint v 0.12.10**



# Pre-requisites



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- **GChemPaint** chemical structure editor



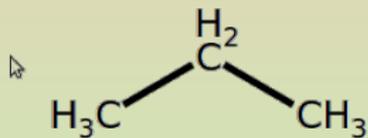
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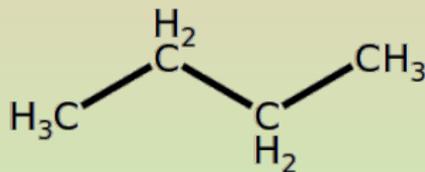
- **GChemPaint** chemical structure editor
- **If not, for relevant tutorials, please visit <http://spoken-tutorial.org>**



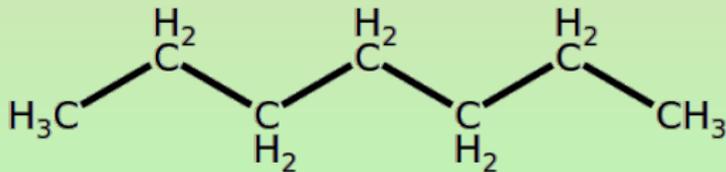
# Structures



Propane



Butane



Heptane

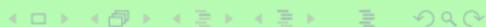


# Assignment

- 1 Draw Ethane and Pentane structures
- 2 Replace one carbon atom of Ethane with Br
- 3 Replace the terminal carbon atoms of Pentane with I



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- For example: Methyl  $CH_3$  is a fragment of Methane  $CH_4$
- Successive members of an Alkyl group differ by a  $CH_2$  group



# Summary

**We have learnt to**

- **Add and modify structure of compounds**
- **Change current element**
- **Add Alkyl groups**
- **Add and modify carbon chain**



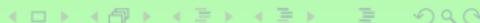
# Assignment

- 1 Draw Octane structure
- 2 Add Propyl and Butyl groups at the fourth and fifth positions of the chain



# About the Spoken Tutorial Project

- Watch the video available at [http://spoken-tutorial.org/What\\_is\\_a\\_Spoken\\_Tutorial](http://spoken-tutorial.org/What_is_a_Spoken_Tutorial)
- It summarises the Spoken Tutorial project



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- It summarises the Spoken Tutorial project
- If you do not have good bandwidth, you can download and watch it



# Spoken Tutorial Workshops

## The Spoken Tutorial Project Team

- Conducts workshops using spoken tutorials
- Gives certificates to those who pass an online test
- For more details, please write to [contact@spoken-tutorial.org](mailto:contact@spoken-tutorial.org)



# Acknowledgements

- Spoken Tutorial Project is a part of the Talk to a Teacher project
- It is supported by the National Mission on Education through ICT, MHRD, Government of India
- More information on this Mission is available at <http://spoken-tutorial.org/NMEICT-Intro>

