Creating a Basic JSmol Integrated Web Page

Spoken Tutorial Project
https://spoken-tutorial.org
National Mission on Education through ICT

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Learning Objectives

We will learn to,

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- ▶ **Create a JSmol integrated HTML text document**

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- ▶ **Download Jmol binary zip file**

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We will learn to,

- ▶ Create a **JSmol** integrated **HTML** text document
- ▶ Download **Jmol** binary zip file
- ▶ Install **Apache** software

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We will learn to,

- **Create a JSmol integrated HTML text document**
- **Download Jmol binary zip file**
- **Install Apache software**
- **Run the HTML page locally using HTTP server, localhost 80**

System Requirements

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- **Ubuntu Linux OS version 20.04**

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- **Firefox web browser version 100.0**
- **Apache version 2.4.41**
- **Jmol version 14.32.83**
- **Working internet connection**

Pre-requisites

To follow this tutorial learner should be familiar with,

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- ▶ **basic operations of Jmol**

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▶ **Please use the link given here for Spoken Tutorials in Jmol Application series**
https://spoken-tutorial.org /tutorial-search/?search_foss= Jmol+Application&search_ language=English

Code Files

▶ The input files required for this tutorial are available in the Code files link

▶ Please download and extract the files

▶ Make a copy of all the files and then use them for practising

About JSmol I

▶ **JSmol** is an open-source **HTML5** viewer for 3D chemical structures

▶ It is a JavaScript framework that allows web developers to create pages

▶ It runs in any web browser that supports **HTML5**

About JSmol II

- **JSmol** integrated web pages are interactive and excellent learning resources

- For more information, please refer to the link given below https://wiki.jmol.org/ index.php/JSmol

1. **Download the Jmol package and extract the contents**
2. **Extract Jsmol.zip file which is present inside the extracted Jmol package**
3. **Move the extracted Jsmol file to the jspage folder**

4. **Open nbutane.html file in a text editor**

5. **Edit the path of JSmol file in nbutane.html document**
   This step will integrate the JSmol program with the web page

6. Edit the **nbutane.html** text document to include 3D model files and text description

7. Run the completed **HTML** page locally using **HTTP** server, localhost 80

Installation of Apache Software

- We need to install **Apache** software in order to run the Jmol web pages locally on our computers
- **Apache** is an open source software
- It is used as a **http** web server to run the **HTML** web pages

Summary

We have,

- ▶ Created a **JSmol** integrated **HTML** text document
- ▶ Downloaded **Jmol** binary zip file
- ▶ Installed **Apache** software
- ▶ Ran the **HTML** page locally using **HTTP** server, localhost 80

Assignment

- Add a few more lines of text in the description for the conformers of n-butane in the HTML page
- Save the HTML page
- Run the HTML page as localhost and view the changes

Assignment

- **Create models of conformations of n-butane using Jmol**
- **Save the 3D models as .mol files**

About the Spoken Tutorial Project

► **Watch the video available at**
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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**

Answers for THIS Spoken Tutorial

- **Questions in THIS Spoken Tutorial?**

- **Visit https://forums.spoken-tutorial.org**

- **Choose the minute and second where you have the question**

- **Explain your question briefly**

- **The Spoken Tutorial project will ensure an answer**

You will have to register to ask questions

Forum for specific questions

- **The Spoken Tutorial forum is for specific questions on this tutorial**
- **Please do not post unrelated and general questions on them**
- **This will help reduce the clutter**
- **With less clutter, we can use this discussion as intructional material**

Acknowledgements