



Semester Long Internship Report

On

Creating Spoken Tutorial for Blender 3.6.0

Submitted by

Pooja Jha

Under the guidance of

Prof.Kannan M. Moudgalya
Chemical Engineering Department
IIT Bombay

Mentor

Ms.Rashmi Patankar
Mr.Khushalsingh Rajput
Ms.Vineeta Ghavri

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Chapter 1

Introduction

The Spoken Tutorial Project is about teaching and learning a particular FOSS (Free and Open Source Software) like Linux, Scilab, LaTeX, PHP MySQL, Java, C/C++, LibreOffice etc. via an easy Video tool. It is a multi-award winning educational content portal. Here one can learn various Free and Open Source Software all by oneself. Its self-paced, multi-lingual courses ensure that anybody with a computer and a desire for learning, can learn from any place, at any time and in a language of their choice. Students, Staff Teachers from Schools, Colleges, Universities, Polytechnics, ITIs, Skill centers, NGOs all can avail the training at very low cost.

The method is Active learning on Computer systems and very suited for Remote/Distance Education. Teachers students can master the software courses on their own, in their own campus and at their own time. Once one gets started any student or faculty can master the Software Course and also get Certificates. UG, PG or Research scholar students and even teachers of Science, IT, Engineering, Commerce, Management, MCA disciplines can learn any of the FOSS.

Today, SMEs and Govt. departments are moving to Open Source Software like Linux OS. Students with this knowledge will have an edge in the job market. They can also become entrepreneurs and use Open Source Software in their businesses, and save money vs., if they were using commercial software. IIT Bombay Spoken Tutorials now offers Partnership opportunity to Computer Institutes/Centres to give their learners a range of 75+ relevant Basic and Specialized Courses. These cover General IT skills, Programming, Web development, Multimedia, Mathematics, Sciences, Industrial process simulation packages and many more. Institutes can train unlimited students in many courses along with Certificates.

IIT Bombay is leading the effort to popularise Blender in India and 3D modelling is one of the best features of Blender. This effort is part of the Free and Open source Software for Science and Engineering Education (FOSSEE) project, supported by the National Mission on Education through ICT of the Ministry of Education.

IIT Bombay is using Spoken Tutorials (<http://spoken-tutorial.org>) to create learning material for FOSS. This is the main page for the organisation of the scripts

required for Blender spoken tutorials. We invite the Blender user community to participate in this activity.

Overall coordination for the series was done by Rashmi Patankar from FOSSEE project, IIT Bombay. Khushalsingh Rajput from FOSSEE project, IIT Bombay, was the domain reviewer for the tutorials.

Chapter 2

Tutorial on Blender 3.6.0

Blender is a multifaceted and free-to-use 3D modeling software that finds applications across various creative fields. Learning Blender can be highly beneficial due to its wide range of uses. In the realm of graphic design and animation, Blender enables artists to craft stunning visuals, whether its for video games, animated movies, or architectural visualizations. Its also a powerful tool for 3D printing enthusiasts, allowing them to design and refine intricate objects with precision.

During this internship, we explored Blender tutorials on the Spoken tutorial site. These tutorials explain the basics of Blender software. However, we noticed that there have been many new versions of Blender released, and the way it works has changed a lot. Because of this, the FOSSEE team decided that we should revamp the old tutorials. Hence, I started working towards revamping the old Blender series.

In these tutorial we have lectures explaining the basics of the newest version of Blender that is Blender 3.6.0.

2.1 Blender Installation

In this tutorial, we have:

- Downloaded and installed Blender 3.6.0 on
 - Windows OS and
 - Ubuntu Linux OS

2.2 Navigation of 3D cursor

In this tutorial, we have learnt

- What is 3D cursor
- How to add new objects to the 3D viewport using 3D cursor
- The snapping options for 3D cursor in Blender

2.3 Camera View Settings

In this tutorial, we have learnt to

- Change the location of the camera to get a new camera view
- Roll, pan, dolly and track the camera view
- Select a new camera view using the fly mode

2.4 Window Types in Blender

In this tutorial, we have learnt to

- Resize any window in the Blender interface
- Toggle between different windows
- Split and close the window
- Maximize any window into full screen mode.

2.5 Types of Windows Blender Preferences

In this tutorial, we have learnt about

- What is Blender Preferences window
- What are the different options available in the Blender Preferences window
- How to customize the Blender interface using the Blender Preferences window
- What is Interface option in Blender Preferences
- What is Themes option in Blender Preferences
- What is Viewport option in Blender Preferences
- What is Navigation option in Blender Preferences
- What is System option in Blender Preferences
- What is Add-ons option in Blender Preferences
- How to save all the settings using Save and Load option in Blender Preferences

2.6 Types of Windows Properties Part 1

In this tutorial, we have learnt

- Properties window
- Render panel in the Properties window
- Various settings in the Output Properties Panel window
- How to Render Animation
- What is Timeline
- What is Output Panel in Properties Window
- What is PNG
- What is FPS or Frames Per Second
- What is Frame Range
- How to change the Frame Range

2.7 Types of Windows - Properties Part 3

In this tutorial we have learnt about,

- What is the Properties editor window
- What are the Constraints panel, Modifiers Panel and Data Panel in the Properties editor window
- Various settings in the Constraints panel
- Various settings in the Modifiers Panel
- Various settings in the Data Panel in the Properties window.
- How to animate a object using Shape keys
- How to Scale a cube.
- What is Copy Location Constraint
- What is Target bar
- What is Subdivision surface modifier

2.8 Types of Windows Properties Part 5

In this tutorial, we have learnt

- About Texture Properties Panel
- To create new texture
- Linked new texture to displacement modifier
- Introduction of Texture Properties Panel
- Subdivide the object
- Displacement Modifier
- Link texture for Displacement Modifier
- Texture Properties panel
- Create new texture
- Link new texture to displacement modifier
- Control the surface of texture by changing properties of Texture
- Observe the surface by changing the properties of Displacement modifier
- Add material on the surface
- Controlled texture surface by varying Texture and Displacement modifier properties

Chapter 3

Novice Check

After we made the script and the slides, we needed someone to make sure the script was right. So, we did something called a "novice check."

This means we asked someone who didn't know much about the software to read the script and follow the instructions. As per the rules, if novice gets stuck, he should inform the person who wrote the script.

Hence, I kept changing the script until the novice could understand it. Only after novice's confirmation we gave it to the Spoken Tutorial admin for further review.

The Novice check was performed by Mr.Beerazz Khadka and it is fully completed.

Chapter 4

Learning

Learning from this Experience:

- Open Source Blender software:
 - How to install Blender
 - Different functionality of Blender interface
 - How to Add and Delete different object on the viewport interface
 - How to manipulate different shapes
- Using LaTeX to create presentations and documents.
- Official Etiquette and Professionalism
 - This is the most important quality that we get to learn by experience in the corporate world.
 - The manners and professional greeting styles are not learned in class room but by observing people who are working in the corporate world successfully.

Chapter 5

Challenges

Challenges that I faced during the internship were:

- Getting my first script right according to the ST norms.
- Understanding core functionality of Blender interface.

Chapter 6

Conclusion

On the whole, this internship has been an useful experience. I have gained knowledge and skills. I was able to achieved my learning goals. I learned the different aspects of working to Create a Spoken Tutorial. Furthermore I experienced that it is of importance that the education is objective and that you have to be aware of the view of other people. This helped me to define what skills and knowledge I have to improve in the coming time.

The professional and technical skills I acquired from this internship will certainly help me in my future works. I feel much more confidence in myself, and now I look forward to facing the upcoming challenges of the world. I hope this experience will surely help me in my future. At last this internship has given me new insights and motivation to pursue my career.

Chapter 7

Reference

- <http://spoken-tutorial.org/>
- <https://docs.blender.org/manual/>