Progress Presentation-I

e-Yantra Summer Internship-2020

42 - *Mastering 3D design using Blender*

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IIT Bombay

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Overview of Project

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Overview of Project
Overview of Task
Task Accomplished
Models created
Models created
Resource
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Major Learnings
Challenges Faced
Future Plans
Thank You

Details of project:

1. **Project Name:**
   - Mastering 3D Design using Blender
2. **Objective:**
   - To Create a MOOC course on Blender in an interactive manner
   - Make a game application through Augmented Reality using Unity software
   - Project based learning modules to interface Microcontroller with Blender
3. **Deliverables:**
   - MOOC presentations, video tutorials on basics of Blender, AR based modules,
   - Blender-Microcontroller interfacing using Python

Overview of Task

Week	S.No	Task	Days
1	1	Understand the project requirements and Blender installation Module	2✓
	2	Learnt basics of Blender and prepared Quizzes for the same	2✓
	3	Learnt Camera setup and changing lighting conditions in Blender and Preparation of Quizzes	1✓
	4	Learnt Latex and Git	1✓
2	1	Designed fish model and Patrol Fish theme arena in Blender	3✓
	2	Preparation of presentations and videos for basics of Blender and BGE	3✗

Table: Task

Task Accomplished

1. **Video recordings**
   - Software Installation
   - Camera and light settings
   - Creation of Patrol Fish theme arena and fish model
   - Animation of Patrol fish Arena in Blender
2. **Transcripts made on**
   - Software Installation
   - Camera and light settings
   - Adding Objects and Materials
3. **MCQs are created on the following topics**
   - Basics of Blender
   - Adding objects and Materials
   - Camera and lighting settings
   - Animation

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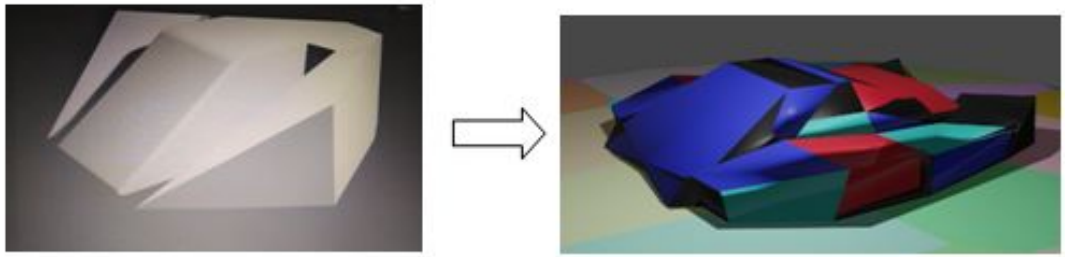
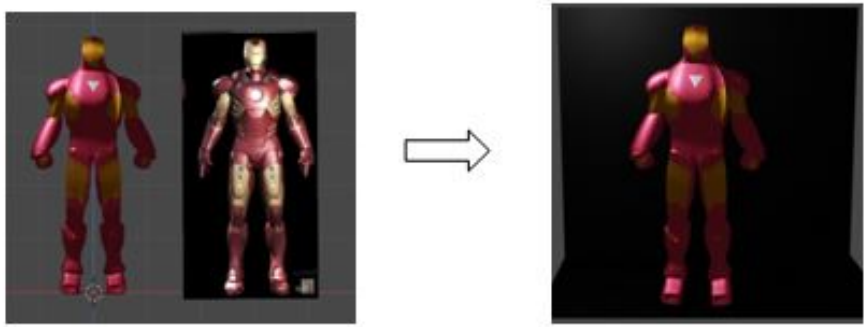
Adding objects,materials and texture

1) A war bot



2) Model of iron man



2) Donut

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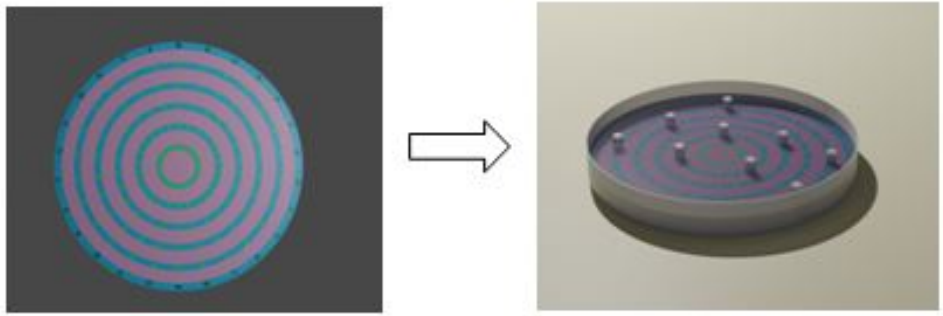
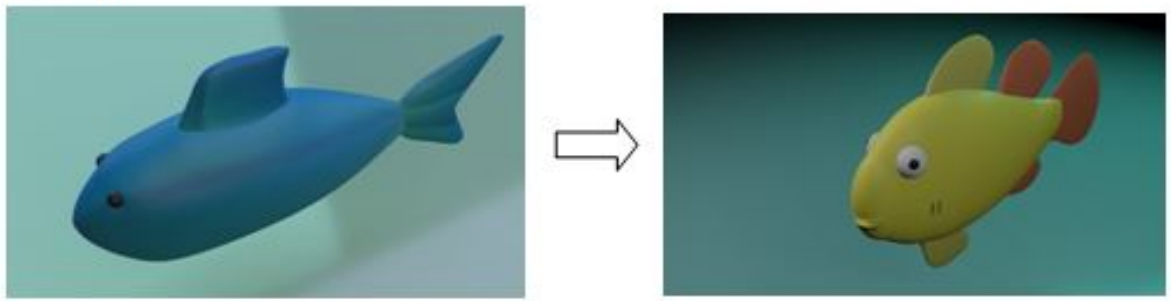
Arena Creation

1) Model 1



2) Model 2

Fish Creation



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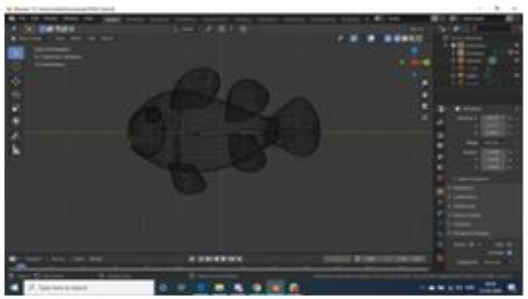
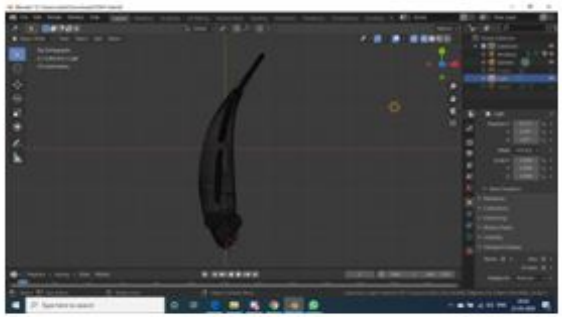
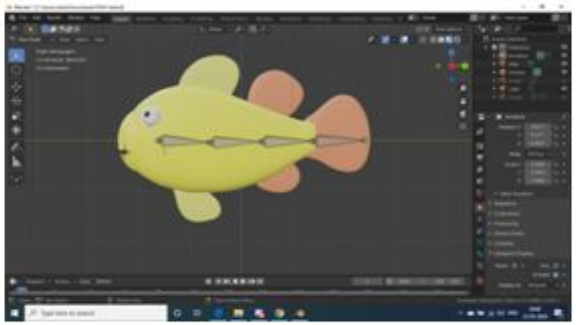
Setting keyframes







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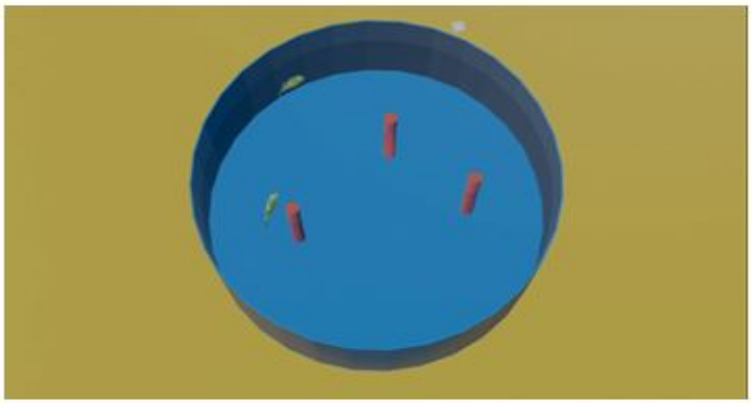
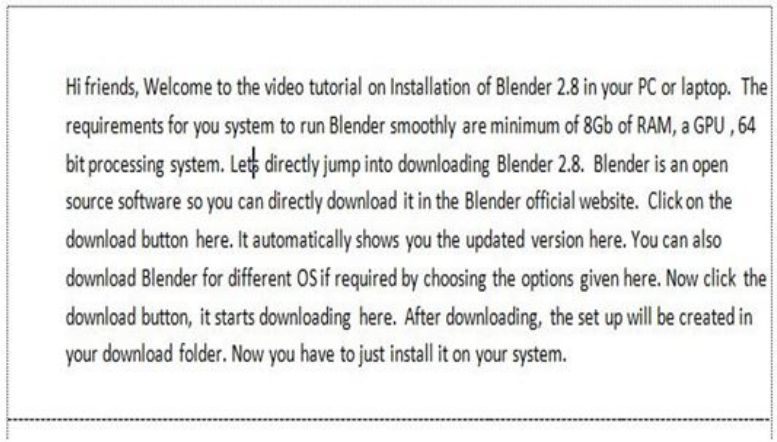
Animation video



MCQs

Example of Transcripts



Hi friends, Welcome to the video tutorial on Installation of Blender 2.8 in your PC or laptop. The requirements for you system to run Blender smoothly are minimum of 8Gb of RAM, a GPU , 64 bit processing system. Lets directly jump into downloading Blender 2.8. Blender is an open source software so you can directly download it in the Blender official website. Click on the download button here. It automatically shows you the updated version here. You can also download Blender for different OS if required by choosing the options given here. Now click the download button, it starts downloading here. After downloading, the set up will be created in your download folder. Now you have to just install it on your system.

Major Learnings

1. **On Blender**
   - Making 3D objects from a reference frame
   - Adding texture to objects
   - Sculpting the objects
   - Animation using armature
   - Usage of Proportional editing
   - UV editing
   - Adding motion path animation
2. Learnt Git and Github Version Control
3. Learnt Latex for documentation and presentation

Challenges Faced

1. **Blender**
   - Adding appropriate key frames to the animation.
   - Rendering animation and images took lot of time.
   - Flipping bones roles are hard.
   - Adjusting camera settings
2. **Git**
   - Pushing the files in the GitHub repository initailized with a readme file

Future Plans

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- Blender Game Engine and the capstone projects
- Interfacing microcontroller with blender and the capstone projects
- Augmented Reality using Unity and the capstone projects

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THANK YOU !!!