VISVESVARAYA TECHNOLOGICAL UNIVERSITY

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ASSIGNMENT REPORT

ON

"SIMPLE ANIMATION OF PERSON CLIMBING STAIRS"

BACHELOR OF ENGINEERING
IN
COMPUTER SCIENCE AND ENGINEERING

Submitted By

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1. Introduction To Animation

Animation is a method in which figures are manipulated to appear as moving images. In traditional animation, images are drawn or painted by hand on transparent celluloid sheets to be photographed and exhibited on film. Today, most animations are made with computer-generated imagery (CGI). Animation is used in various fields including entertainment, education, advertising, and virtual reality.

Types of Animation

1. **Traditional Animation**: Also known as cell animation, this involves drawing every frame by hand.
2. **2D Animation**: This includes vector-based animation and is often used in cartoons and advertisements.
3. **3D Animation**: Utilizes three-dimensional models and is used extensively in movies, games, and simulations.
4. **Motion Graphics**: Involves animated graphic design elements.
5. **Stop Motion**: Created by physically manipulating real-world objects and photographing them frame by frame.

2. Simple Animation Task

For this report, a simple animation task was undertaken using Pivot Stick figure Animator. The task aimed to demonstrate the basic principles of animation through the creation of a stick figure performing a climbing on stair motion.

Task Description

The objective was to create a basic, loop able animation of a stick figure walking across the screen. This simple task helps in understanding the following:

- **Frame-by-frame animation**: Creating each frame individually to form a complete sequence.

- **Timing and spacing**: Determining the number of frames needed for each step to make the motion look natural.
- **Smooth transitions**: Ensuring that the movement from one frame to the next is fluid.

Learning Outcomes

Through this animation task, several key concepts and skills were developed:

- **Understanding Motion**: Grasping how different parts of the body move in coordination to create a walking cycle.
- **Attention to Detail**: Paying close attention to small changes in position and angle to create a realistic motion.
- **Patience and Precision**: Developing the patience to adjust each frame meticulously for a smooth animation.
- **Basic Software Proficiency**: Gaining hands-on experience with Pivot Stickfigure Animator and understanding its basic functionalities.

By completing this simple task, the foundation for more complex animations is established, providing a practical introduction to the fascinating world of animation.

3. Tools or Software Used

Pivot Stickfigure Animator

Pivot Stickfigure Animator is a freeware application that allows users to create animations using stick figures. The simplicity of the software makes it accessible for beginners to understand the basics of animation without the complexity of more advanced software.

Key Features:

- Easy manipulation of stick figures
- Frame-by-frame animation
- Exporting animations as GIFs
- Basic tools to add, delete, and move stick figure joints

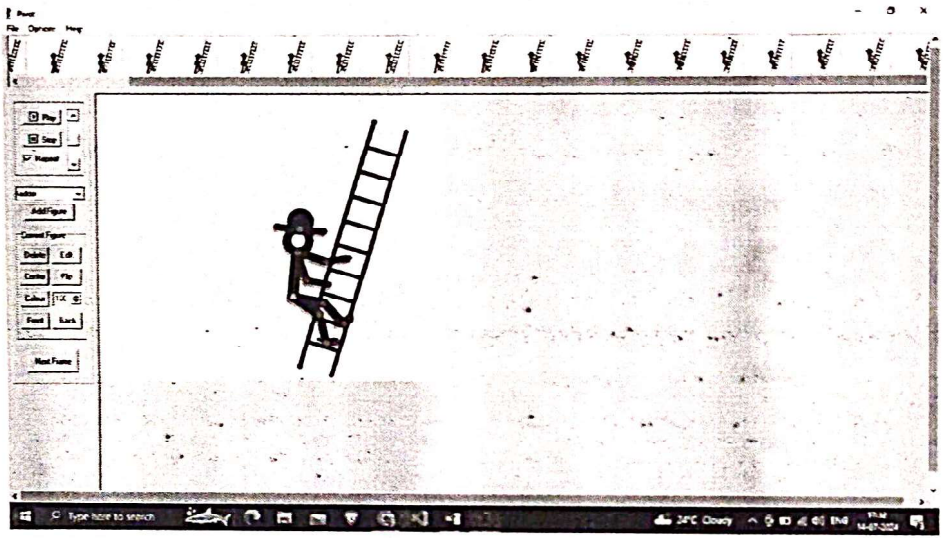
4. Procedure to Complete Animation

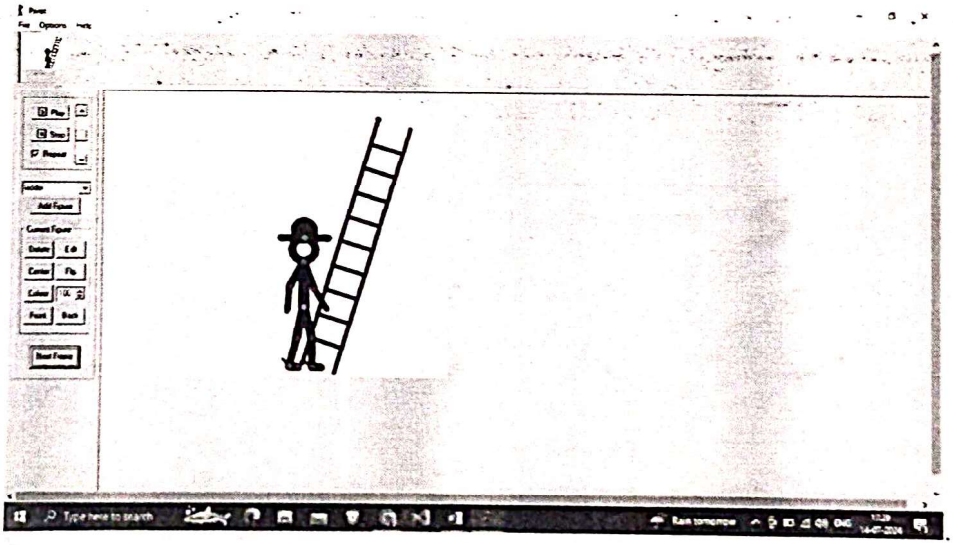
- **Download and Install Pivot Stickfigure Animator**
  - Download the software from the official website or a trusted source.
  - Install the application following the on-screen instructions.
- **Create a New Project**
  - Open Pivot Stickfigure Animator.
  - Click on 'File' and select 'New' to start a new project.
- **Add a Stick Figure**
  - The default stick figure will appear on the canvas.
  - You can add more figures by clicking on 'Add Figure' from the figure control panel.
- **Position the Stick Figure**
  - Click and drag the red nodes to position the stick figure.
  - Adjust the limbs and body to the starting position of the animation.
- **Set the First Frame**
  - Once the figure is positioned, click 'Next Frame' to set the first frame.
- **Animate the Movement**
  - Slightly adjust the position of the stick figure to create the next frame of movement.
  - Continue to adjust and add frames to build the sequence of the walking motion.
  - Use the 'Onion Skin' feature to see the previous frame, helping to ensure smooth transitions.
- **Preview the Animation**
  - Click 'Play' to preview the animation.
  - Adjust frames if necessary to improve the fluidity of the movement.
- **Save the Animation**
  - Once satisfied with the animation, save the project by clicking 'File' and selecting 'Save As.'
  - You can also export the animation as a GIF by selecting 'File' and then 'Export Animation.'

5. Conclusion

Creating animations can be a rewarding experience, providing insight into the principles of motion and timing. Pivot Stickfigure Animator offers an excellent platform for beginners to experiment with animation in a straightforward and intuitive manner. Through this simple task of animating a stick figure walking, fundamental skills in animation are developed, paving the way for more complex projects in the future.

6. Screenshots





2.3.2 ICT Enabled Tools for Teaching/Learning Process
2023-24

Sl. No.	ICT	Teaching/ Learning	Semester	Subject/ Subject Code	Faculty Name
1	Power Point Presentation, Models, Videos	Teaching & Learning	4	Structural Biology and Biophysical Techniques-BBT405D	Dr H G Nagendra
2	Power Point Presentation		3	Microbiology BBT304	Dr. Priya Narayan
			6	Food Nutrition and Health 21BT652	
			7	Clinical and Pharmaceutical BT 18BT72	
3	Power Point Presentation, Model		3	Unit Operations – BBT302	Mrs. A. Niveditha
4	Power Point Presentation		5	Genomics and Proteomics 21BT54	Dr. Jagadeesh Kumar D
			4	Cell Biology & Cell Culture Techniques 21BT43	
			6	Marine BT 18BT842	
5	Power Point Presentation, Videos			Molecular Biology & Genetic Engineering BBT401	Dr Rashmi K V
6	Power Point Presentation, Software Tool Usage		3	Python Programming-21BT42	Dr. Halima R
7	Power Point Presentation; https://youtube.com/@halimajenish1552?si=EnSIkaIECMiOmarE		8	Regulatory Affairs in BT Industry- 18BT81	
8	https://youtube.com/@BforBiotech?si=EnSIkaIECMiOmarE		7	Bioreactor Design Concepts-18BT732	Dr. Ishwar Chandra