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Report on the Mini Project

“PARK SIMULATION”

Course Name: Computer Graphics and Multimedia
Course Code: 17CS703

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Section: B

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Date of submission: 22-12-2020

Signature of the course instructor



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DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

CERTIFICATE

"PARK SIMULATION"

is a bonafide work carried out by

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in partial fulfilment of the requirements for the award of Bachelor of Engineering degree in computer science and engineering prescribed by the Vishvesvaraya Technological University, Belagavi during the year 2020 - 2021

It is certified that all the corrections/suggestions indicated for internal assessment have been incorporated in the report.

The mini-project report has been approved as it satisfies the academic requirements in respect of the project work prescribed for the Bachelor of Engineering Degree.

Signature of Guide

Signature of HOD

ACKNOWLEDGEMENT

We believe that our project will be complete only after we thank the people who have contributed to making this project successful.

First and foremost, we express our deep sense of gratitude and indebtedness to our guide Mr Pradeep Kanchan, Assistant Professor, Department of Computer Science and Engineering, for his inspiring guidance, constant encouragement, support and suggestions for improvement during the course of our project.

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We also thank all those who have supported us throughout the entire duration of our project.

Finally, we thank the staff members of the Department of Computer Science and Engineering and all our friends for their honest opinions and suggestions throughout the course of our project.

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TABLE OF CONTENTS

CERTIFICATE	2
ACKNOWLEDGEMENT	3
TABLE OF CONTENTS	4
INTRODUCTION	5
Computer Graphics	5
OpenGL	5
ABSTRACT	6
IMPLEMENTATION DETAILS	7
SCREENSHOTS	8
CONCLUSION	11
REFERENCES	11

INTRODUCTION

Computer Graphics

Computer graphics is a subfield of computer science which studies methods for digitally synthesizing visual content. Although the term often refers to the study of three-dimensional computer graphics, it also encompasses two-dimensional graphics and image processing.

OpenGL

OpenGL is a cross-language, cross-platform application programming interface for rendering 3D vector graphics. The API is typically used to interact with a graphics processing unit, to achieve hardware-accelerated rendering.

This project aims at simulating a lively park using 2D modelling. 2D Models help see the actual views in an easy and efficient way and sometimes is the only efficient representation of views.

ABSTRACT

This project is focused on simulating the park using 2D modelling using the OpenGL. In this, we try to show various playthings in a park and also we try to give control of the human child to the user so that they can decide which item the child should play with.

We try to incorporate different playthings that are found in the parks such as bench, swing, glider, slider, rotating wheel, the surrounding greenery and bright blue sky.

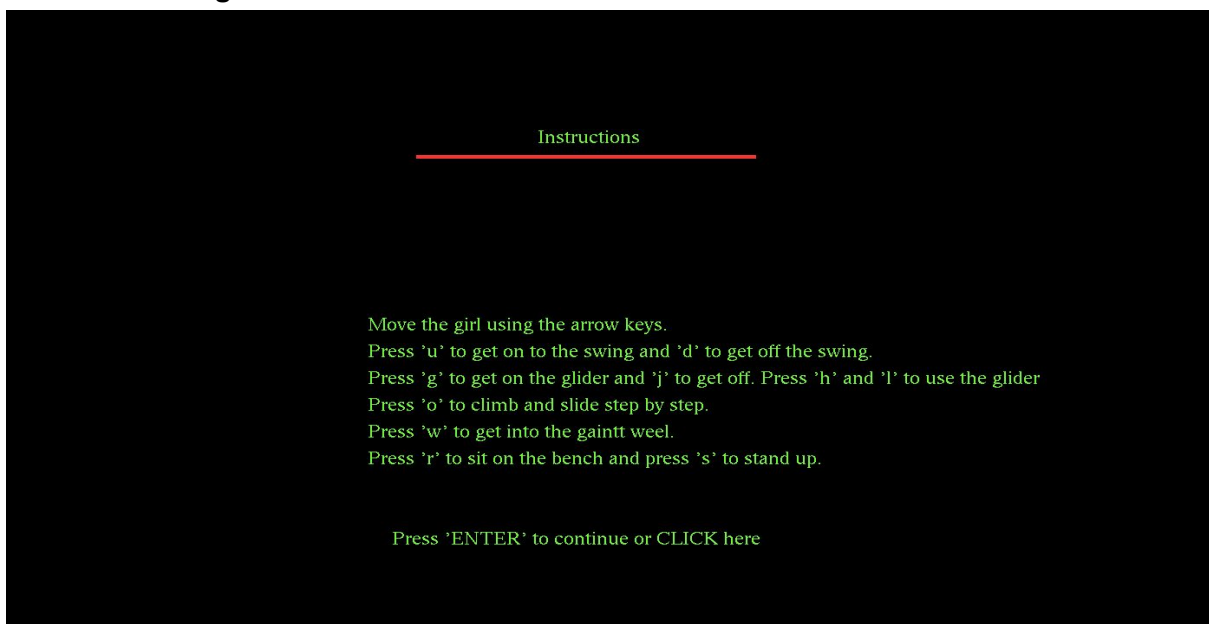
IMPLEMENTATION DETAILS

SCREENSHOTS

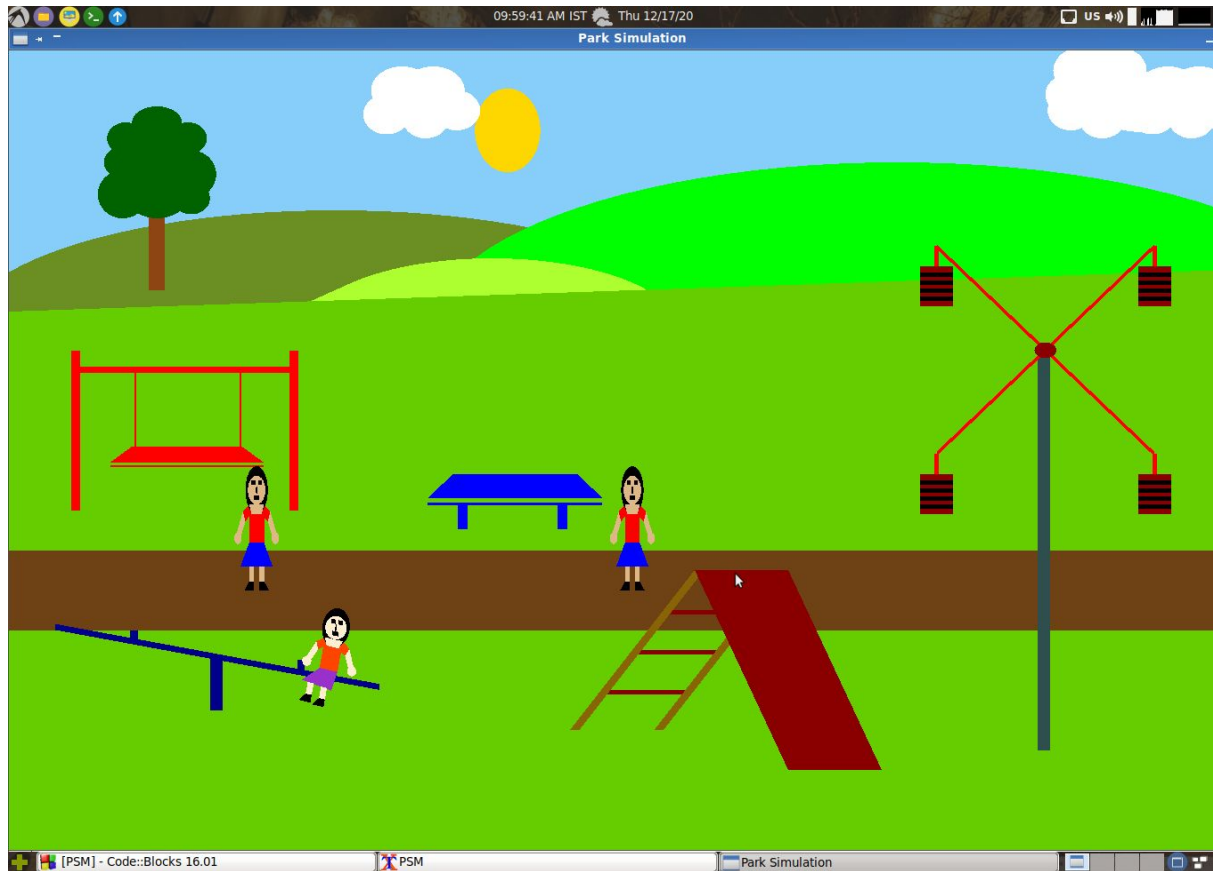
Intro Page



Instructions Page



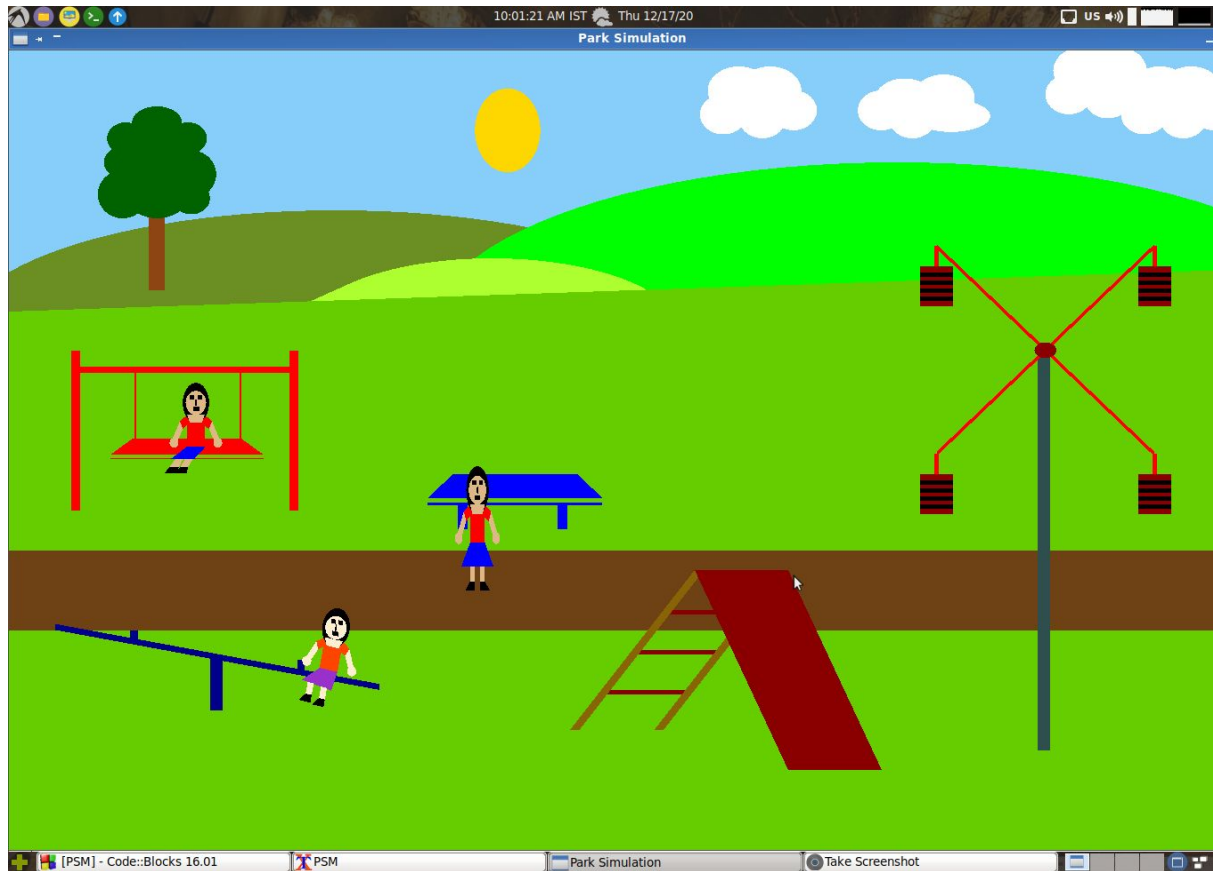
Scenary



Girl on the slide



Girl on the swing



Girl on the wheel



CONCLUSION

We have successfully implemented the simulation of the park using OpenGL. We have also implemented the kids playing successfully along with the user having control over the movements and choice of the kids using an interactive keyboard interface. The user can make the child move around the field and also try out the different rides and playthings available.

REFERENCES

Following websites and blogs were referred for the OpenGL documentation and implementation:

1. [Opengl.org](http://opengl.org)
2. [Khronos.org](http://khronos.org)
3. [Opengl-tutorial.org](http://opengl-tutorial.org)