



ABV - Indian Institute Of Information Technology
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Project Report

Topic - GameLib

Object Oriented Programming

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1 Introduction to GameLib

Games are an essential part of every person's life. Be it a kid, a youngster or an elder, everyone is aware of and have played various games. Games have always been a part of our culture and they still are. Games like 'Chaupar', 'Ashtapad', 'Krida-Patram' and many more have always been referenced in many historical texts. Be it any era, games have always been present to entertain people and have kept on evolving to suit the human mind.

1.1 GameLib

GameLib is a software application which provides the user with plenty of games to play. It is written completely in the C++ programming language and is built specifically for the Windows(x64) Operating System*.

The application utilizes a third party library known as Simple DirectMedia Layer which provides us with low level access to audio, keyboard, mouse, and graphics hardware via OpenGL and Direct3D.

There are, at present, five games available in GameLib :

- Tic-Tac-Toe
- Pong
- Hangman
- Snake
- Flappy Bird

*This is subject to change as versions in the future may be able to include multiple platforms.

1.2 Features

The features of this project are something that differentiates it from other similar applications. Some remarkable features include :

- Authentication - The application keeps track of the user who has registered to it and lets the user create a password for it during registration. Only a authenticated user can play the games that are included in the application.
- Security - The application is completely secure and the passwords are encrypted so that no other user can alter your private data.
- Multiple Users - The application has the ability to create various user profiles and manage them seperately, thus allowing multiple users to access the application.
- AI - Certain two player games also have the feature of AI to play the chance of a player so that even a single player can be entertained by the games. This feature is remarkable because it makes sure that the computer never misses a chance to have an equal or upper-hand on the user.
- User Interface - The user interface for the application is completely graphical and is elegant enough to keep the user engaged. The visuals are gripping along with a dark theme to provide the best user experience.

2 Principles and Concepts

2.1 Game Programming

2.2 Object Oriented Programming

3 Significance of the project

References