

PREPARED BY:

Yeasir Ibna Hasibur Rahman

Student

Bangladesh University Of Business and
Technology

COMMUTER SCIENCE ENGINEERING

PROJECT PROPOSAL

PREPARED FOR:

Md.Ashiqur Rahman

Lecturer

Bangladesh University Of Business
and Technology

Rupnagar,Mirpur-1216,
Dhaka.

Bangladesh University of Business and Technology



Project Report

Course Title : Software Development Programming II

Course Code : CSE-200

Report on :

Submitted By:

MD. Monirul Islam
ID:(20234103338)

MD.Jahidul Islam Shihab
ID:(20234103347)

Abu Siam Murad
ID:(20234103348)

Al Nasir Uddin Siam
ID:(20234103349)

Yeasir Ibna Hasibur Rahman
ID:(20234103358)

Intake : 52

Section: 09

Program: B.SC CSE

Submitted To:

Name: Md. Ashiqur Rahman
Lecturer

Department of CSE

Bangladesh University of Business
and Technology

Submission Date

Teacher's signature

Project Proposal

1. Project Title: Game Hive

2. Objectives :

The purpose of this project is to develop an engaging and interactive gaming platform that offers a collection of mini-games. The project aims to:

- Provide a user-friendly interface for playing multiple classic games with ease.
- Enhance logical thinking and problem-solving skills through interactive gameplay.
- Offer a seamless gaming experience with smooth performance and intuitive controls.
- Allow users to track their progress and compete with others via a leaderboard.
- Provide a flexible gaming environment with both single-player and multiplayer options.

3. Features :

Game Hive will include the following key functionalities:

- 1. User Authentication :** Secure Login & Sign-up functionality with encrypted credentials.
- 2. Game Selection Menu:** A visually appealing menu to choose from various mini-games.

3. Mini-Games Included:

- **Tic Tac Toe:** A two-player strategy game where players take turns marking spaces in a 3x3 grid.
- **Hangman:** A word-guessing game where players try to identify a hidden word by guessing letters.
- **Maze Game:** A time-based maze game where players navigate to the exit while avoiding walls.
- **Brick Busters:** A classic brick-breaking game where players control a paddle to bounce a ball and destroy all bricks.

4. Game Statistics: Track user performance, wins, and scores for each game.

5. Leaderboard: Display top players and their rankings based on gameplay performance.

6. Save & Resume: Users can save their progress and resume games later.

7. Multiplayer Mode: Support for local and online multiplayer functionality for applicable games.

8. User Settings: Customize game preferences, sound, and difficulty levels.

9. Analytics Dashboard – Provide detailed insights into player performance, gaming habits, and trends using charts and graphs. Users can analyze win/loss ratios, time spent on each game, and overall improvement over time.

4. Technologies Used:

- **Language:** Python
- **GUI Framework:** Pygame for an immersive gaming experience.
- **Database:** SQLite for storing user authentication data, game statistics, and leaderboard rankings.
- **Game Logic:** Custom Python scripts tailored to each mini-game, ensuring smooth gameplay mechanics.
- **Networking:** WebSockets for multiplayer support in applicable games.
- **Graphics & Sound:** Pygame for animations, sound effects, and an enhanced user experience.

5. Expected Outcome:

The final product will be a well-designed desktop gaming application that provides users with a variety of interactive and engaging mini-games. Game Hive will feature an intuitive user interface, real-time performance tracking, multiplayer functionality, and customization options, making it an entertaining and dynamic gaming hub. The application will serve as a casual gaming platform suitable for users of all ages, allowing them to challenge themselves or compete with friends.