

# ELONTI BELONTI





Dept. of Computer Science & Engineering,  
University of Dhaka.

## Project Report

Fundamentals of Programming Lab (CSE-1211)

Game Name  
Elonti-Belonty

**Submitted By**

Group ID - 2021CSE1211021

Team Members

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# Introduction

This game is a 2D single-player game consisting of 3 levels. The game idea comes from a very traditional rural game named Elonti Belonti and Pakhi Ore(Birds Fly). Anyone can play this game with the help of the **Help** section which broadly includes how to play the game.

## Game Controls

In this game, it is easy to control the player using keyboard buttons. We can control the game by mouse click.

## Objectives

1. Applying C language learning in a Real-life project
2. Turning a rural sport into a video game
3. Having attractive graphics and animation along with interactive sound

4. Having a simple but well-organized and modular code that can be easily understood and developed or customized later.

## Project Features:

1. A Loading page with the game logo (Custom Created).
2. Attractive and dynamic menu options to control the game
7. Showing Instructions on the created window

KEY



RUN



JUMP



PUSH



KEY

HANDS UP



WALK LEFT



WALK RIGHT



HANDS DOWN

Levels:

LEVEL 1

**TRUE OR FALSE**

**YOU HAVE TO GUESS  
WHETHER THE WORDS  
ARE TRUE OR FALSE  
TO SURVIVE**

Words can be predicted after playing couple of times because we randomized it.

LEVEL 2

**RUNNING OVER OBSTACLES**

**YOU HAVE TO REACH  
THE DESTINATION  
OVERCOMING  
THE OBSTACKLES  
TO SURVIVE**

**LEVEL 3**

**RED LIGHT, GREEN LIGHT**

**YOU HAVE TO REACH  
THE DESTINATION  
OVERCOMING  
THE OBSTACLES IN TIME  
TO WIN**

**LEVEL 3**



**STARTS FROM THE STARTING LINE**



**WHEN MUSIC IS ON YOU WILL HAVE TO MOVE  
TOWARDS THE FINISH LINE**



**WHEN MUSIC IS OFF YOU MUST IMMEDIATELY  
STOP**



**YOU HAVE TO CROSS THE FINISH LINE WITHIN  
THE GIVEN TIME**

Music time cant be predicted because we randomized it.

# Project Modules

## main.cpp

It is the main file of this game. The game starts from this game. It includes all necessary header files that are custom. The main.cpp file firstly linked with AllHeaderfiles named header file and then from these header files many custom function called in main file .Like  
init(), loadMedia(), LoadRect(),  
audioLoad(), WelcomeToELontiBelonti(), TimeRandomize(), Or  
reRandomIZ() have called in main.cpp file .The description of these header files and functions will be included in the next section. Then in main.cpp file the game loop starts and the loop is controled by isRunning which is a boolean variable . and Then we called the functions named  
Level1, Level2, Level3 and startmenu function .And after the end of game loop we called close function which contains the all SDL2 elements close statement .

## Header files



The game contains the following 11 custom header files to easy to understand and making the game modular:

- **init.h:** This header file contains one function named `init()` which includes the window creation ,surface creation and renderer creation.This file also contains the close function which includes the all closing statement of texture ,ttf fonts and renderer and window.
- **LoadMedia.h:** This header file contains all texture creation part of the game .Like to make a texture we need to load image in the surface and then creating the texture from this surface with the help of SDL2 functionalities and then free the surface so that it can be rendered.And all images that will be used to make textures are included in this file and everything under a fuction named `LoadMedia()` .
- **RectLoad.h:** This file contains all rectangle which will be used to store the texture and place it to correct position in the screen.This function also contains a function named `RectLoad()` .Which is basically declaring all the rectangles(rect) and defining their position on the window and ther height and width .
- **Audio.h:**This file contain all necessary audio files which are being used in this game.It also contains a void file named `audioLoad()` ,which contains all mp3 and .wav file for audio and loaded chunk (A SDL2

features to load music under music header file of SDL2 library).

- event.h: This function contains GetEvent() function to get the state of the key press, mouse press in the game to move, run the player .
- startMenu.h: It includes the Start, Help and Exit button . In Start button , the game can be played level by level . In Help button . all descriptions of levels and how to play , which key to pressed are broadly displayed with interactive button and user control. And in Exit , we can exit from the whole game.
- level1.h: This file contains the Level1() function which to play the level 1 of the game .
- replay2.h: It contains the necessary program to replay the level 2 of this game.
- level2.h: This file contains the Level2() function to play the level 1 of the game .
- level3.h: This file contains the Level1() function which to play the level 1 of the game .
- replay1.h: It contains the necessary program to replay the level 3 of this game.

## Platform, Library & Tools

Platform: Linux

Library: SDL2, SDL2\_Image, SDL2\_Mixer

Tools: VScode, Adobe Photoshop, Photopea, Canva

## Limitations

The game is limited to level 3. The game is not totally smooth. Level 1 and level 3 works nicely but in level 2 there is some bugs, yes it can be solved. But we couldn't solve it due to time shortage.

## Conclusions

We learned about the sdl2 library, group development and building, and lots of bug fixing. We had a lot of fun making this game. Our knowledge of C and C++ has grown. We

hope we can implement these learnings in our life in the future.



## Team Members contribution

Diptajoy Mistry:

1. Making 3rd Level of the game
2. Making 2nd Level of the game with mukul
3. Making interface of the game

## Rasel Hossen :

1.Making All Header files of the game and making the game modular

2.TTF loading and sound adding in the game ,window creation ,texture creation logic in SDL

3.Making First Level of the game with mukul.

## Mushiur Mukul :

1.Second level creation with dipto

2.Graphics of the game ,images

3.Making First Level of the game with rasell.

## References .

SDL Learning Sources:

[Lazyfoo](#)

## Repositories & YouTube Video :

[github](#)

[youtube](#)