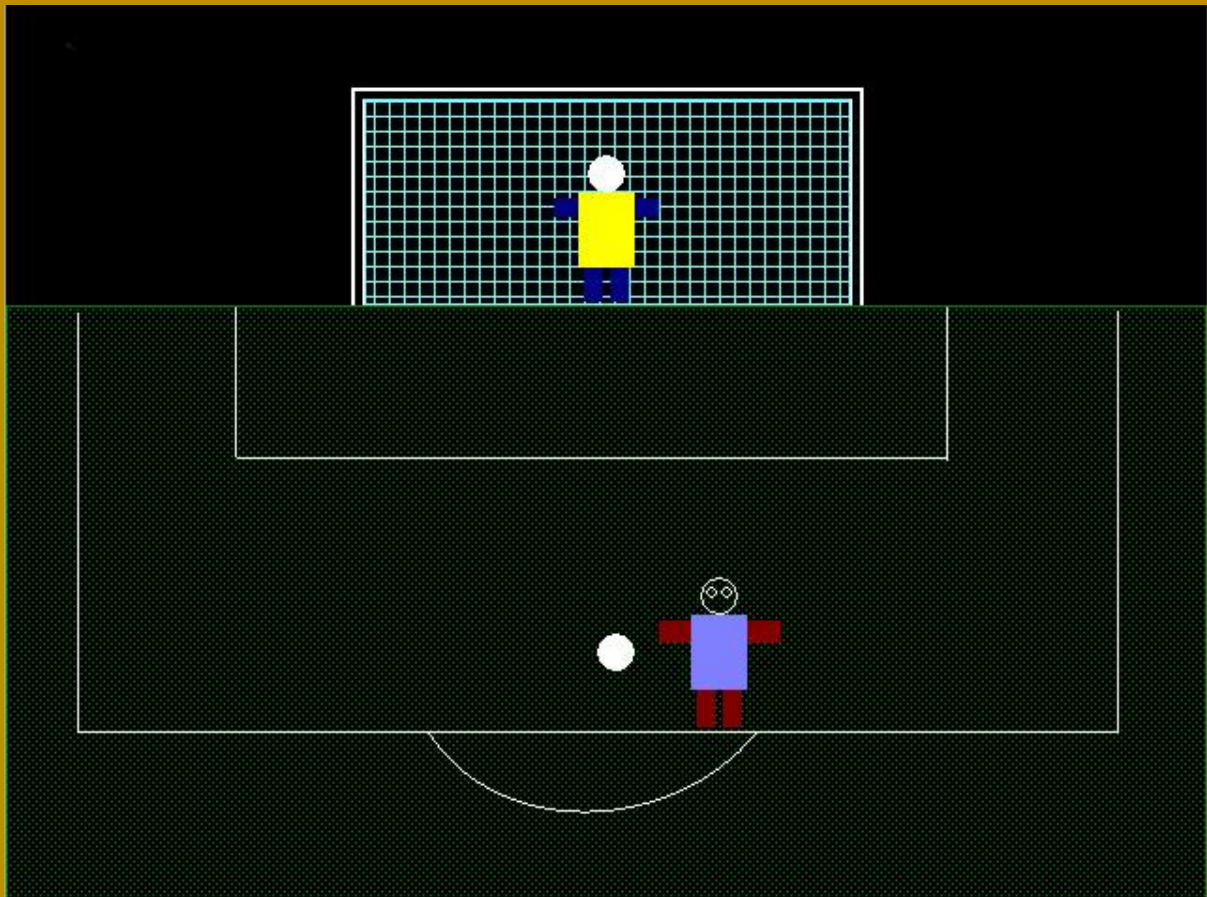




Mawlana Bhashani Science and Technology University
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**A Report on
C Programming Project**
ICT-1210

Penalty Soccer



***A PROJECT SUBMITTED TO THE DEPARTMENT OF INFORMATION
AND COMMUNICATION TECHNOLOGY, MAWLANA BHASANI SCIENCE
AND TECHNOLOGY UNIVERSITY, SANTOSH, TANGAIL***

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PREFACE

Special Thanks

Special thanks to dear sir **Kawsar Ahmed**. He helps to develop the project and basic structure. His insights, expertise, and energy contributed greatly to the success to this project. He has helped on several on my project and, as always, his efforts are appreciated. We also wish to express my gratitude to the sir, especially for invaluable suggestions and critical review of this project. Moreover, we are very glad to thank to Badrul Alam Miah, Chairman, Department of ICT, Sajjad Waheed, Associate Professor, Ali Newaz Bahar, Assistant Professor, Md. Abir Hossain, Lecturer, Ziaur Rahman, Assistant Professor, Department of Information and Communication Technology, Mawlana Bhashani Science and Technology University for their helping hand in different way to complete.

Finally, we wish to thank many friends and seniors for their helpful cooperation.

ACKNOWLEDGEMENT

The authors feel proud to have the opportunity to express their heart-felt and most sincere gratitude to a number of peoples who have them in courses of this project.

This project was performed under the supervision of Kawsar Ahmed, Assistant Professor, Department of Information and communication Technology (ICT), Mawlana Bhasani Science and Technology University, Santosh, Tangail. First and foremost, the authors wish to concede their profound indebtedness to him for guidance, valuable suggestions, encouragement and cordial cooperation.

We are also grateful to the rest of the teachers of our respective Department, Department of Information & Communication Technology for helping us in many ways.

Heartiest thanks to my Department of the University, Information & Communication Technology for providing me such an opportunity for the accomplishment of our project smoothly.

Lot of thanks to those who were the respondents of our project work & soulfully helped us a lot for the collection of data for our project.

Finally, we would like to express our gratitude to the development staff and friends, who have inspired us in this project.

Jahid Tanvir
&
Md. Abu Saleh Shipon
April, 2017.

List of Figure:

Figure - 1.1: Dennis Ritchie, inventor of the C Programming language stands next to Ken Thompson, original inventor of UNIX, designing the original UNIX operating system at Bell Labs on a PDP-11

Figure - 1.2: Graphics Programing Lab View in 1960

Figure - 1.3: Mouse

Figure - 1.4: Shows what a punch card looked like

Figure - 1.5: Model-33 Teletype

Figure - 1.6: Alto workstation

Figure - 4.1(a): Welcome Page

Figure - 4.1(b): Welcome Page

Figure - 4.2(a): Instructions

Figure - 4.2(b): Loading Bar

Figure - 4.3: Scoring

Figure - 4.4(a): Goal Animation

Figure - 4.4(b): No Goal Animation

Figure - 4.5: Game History in File

List of Table:

Table – 3.1: List of Header Files

Table - 3.2: Built In Functions Of conio.h

Table - 3.3: Built In Functions Of stdio.h

Table - 3.4: Built In Functions Of graphics.h

Table - 3.5: Built In Functions Of stdlib.h

Table - 3.6: Built In Functions Of iostream

Table - 3.7: Built In Functions Of fstream

Table - 3.8: Built In Functions Of time.h

Contents

Chapter 1: INTRODUCTION	Page No.
1.1 Introduction	09
1.2 C Programming	09
1.3 Graphics Design	10
1.4 Mouse Programming	11
1.5 Conclusion	15
Chapter 2: BACKGROUND	
2.1 Introduction	16
2.2 Background	16
2.3 The Idea	16
2.4 Conclusion	17
Chapter 3: METHODOLOGY	
3.1 Introduction	18
3.2 Header Files	18
3.3 Elaboration of Code	23
3.4 Conclusion	26
Chapter 4: RESULT OF PROJECT	
4.1 Introduction	27
4.2 Welcome to Game	27
4.3 Instruction & Loading Bar	28
4.4 Scoring	29
4.5 Goal & No Goal	30
4.6 Game History in File	31
4.7 Conclusion	31

Chapter 5: CONCLUSION	32
❖ REFERENCE	33
❖ APPENDIX	
• List of Header File	34
• Source Code	35

CHAPTER 1: INTRODUCTION

1.1: Introduction

In this Chapter we discuss about the history of C Programming, Graphics Design and Mouse Programming. We also Express, How upgrading this programs day by day.

1.2: About C Programming Language

The computing world has undergone a revolution since the publication of The C Programming Language in 1978. Big computers are much bigger, and personal computers have capabilities that rival mainframes of a decade ago. During this time, C has changed too, although only modestly, and it has spread far beyond its origins as the language of the UNIX operating system.



```
“  
#include <stdio.h>  
main()  
{  
    printf("hello, world\n");  
}  
Dennis M. Ritchie (1941-2011)”
```

Figure - 1.1 Dennis Ritchie, inventor of the C Programming language stands next to Ken Thompson, original inventor of UNIX

The growing popularity of C, the changes in the language over the years, and the creation of compilers by groups not involved in its design, combined to demonstrate a need for a more precise and more contemporary definition of the language than the first edition of this book provided. In 1983, the American National Standards Institute (ANSI) established a committee whose goal was to produce an unambiguous and machine-independent definition of the language C, while still retaining its spirit. The result is the ANSI standard for C.

The standard formalizes constructions that were hinted but not described in the first edition, particularly structure assignment and enumerations. It provides a new form of function declaration that permits cross-checking of definition with use. It specifies a standard library, with an extensive set of functions for performing input and output, memory management, string manipulation, and similar tasks. It makes precise the behavior of features that were not spelled out in the original definition, and at the same time states explicitly which aspects of the language remain machine-dependent.

I have chosen to follow that book's organization in this book's structure. The main difference is that their book is machine independent and gives lots of examples based on manipulating text, while this book is machine dependent.[1]

1.3: About Graphics Design

Computer graphics are pictures and movies created using computers – usually referring to image data created by a computer specifically with help from specialized graphical hardware and software. It is a vast and recent area in computer science. The phrase was coined by computer graphics researchers Verne Hudson and William Fetter of Boeing in 1960. It is often abbreviated as **CG**, though sometimes erroneously referred to as CGI.



Figure - 1.2 Graphics Programing Lab View in 1960

Important topics in computer graphics include user interface design, sprite graphics, vector graphics, 3D modeling, shades, GPU design, and computer vision, among others. The overall methodology depends heavily on the underlying sciences of geometry, optics, and physics. Computer graphics is responsible for displaying art and image data effectively and meaningfully to the user, and processing image data received from the physical world. The interaction and understanding of computers and interpretation of data has been made easier because of computer graphics. Computer graphic development has had a significant impact on many types of media and has revolutionized animation, movies, advertising, video games, and graphic design generally.

The precursor sciences to the development of modern computer graphics were the advances in electrical engineering, electronics, and television that took place during the first half of the twentieth century. Screens could display art since the Lumpier brothers' use of mattes to create special effects for the earliest films dating from 1895, but such displays were limited and not interactive. The first cathode ray tube, the Braun tube, was invented in 1897 - it in turn would permit the oscilloscope and the military control panel - the more direct precursors of the field, as they provided the first two-dimensional electronic displays that responded to programmatic or user input. Nevertheless, computer graphics remained relatively unknown as a discipline until the 1950s and the post-World War II period - during which time, the discipline emerged from a combination of both pure university and laboratory academic research into more advanced computers and the United States military's further development of technologies like radar, advanced aviation, and rocketry developed during the war. New kinds of displays were needed to process the wealth of information resulting from such projects, leading to the development of computer graphics as a discipline.[2]

1.4: About Mouse Programing

A computer mouse is a pointing device (hand control) that detects two-dimensional motion relative to a surface. This motion is typically translated into the motion of a pointer on a display, which allows a smooth control of the graphical.



Figure – 1.3 Mouse

A computer mouse with the most common standard features:

- Two buttons (left and right) and
- A scroll wheel, which can also act as a third button.

Physically, a mouse consists of an object held in one's hand, with one or more buttons. Mice often also feature other elements, such as touch surfaces and "wheels", which enable additional control and dimensional input.

In this lesson, we shall learn:

- How to do something when input *events* occur. Events covered are key Pressed (when a key on the keyboard is pressed), mouse Clicked (when the left button on the mouse is pressed), and mouse Moved (when the mouse is moved within the graphics canvas), and
 - How to get the X and Y coordinates where the mouse was when its left button was clicked.
-

THE USER INTERFACE

These days, most of the interaction with a computer or any device with a computer in it, is via what's called a **Graphical User Interface**. In computer-speak it's commonly called the **GUI**, (pronounced goo-ee).

On a desk side computer system, the GUI provides ways for you to launch programs, display stuff, etc... All with a mouse pointing device. When you are interacting with programs, you use a pointing device (a mouse) to open up menus, choose items from the menus, check boxes that determine how your program should do things. It's a point-and-click environment. When it is time to enter text, you have the keyboard.

On a calculator or mobile phone, much of the interaction is done with buttons - buttons for numbers, menu buttons, and arrow buttons for moving around within the menu system. For text entry, sometimes the buttons are used, but some devices have tiny key pads (made popular by the Blackberry messaging device).

The first two computers I got to use only dealt with cardboard cards with holes punched in them for input.

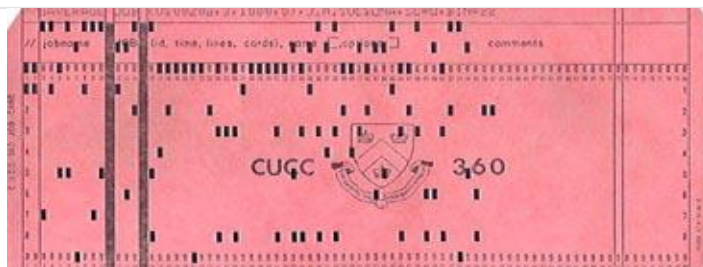


Figure – 1.4 Shows what a punch card looked like

But, by the time I got my first job, my interface was through a teletype terminal, and this was a major step forward! I could actually interact with the computer, not just submit something for it to do and then wait for something to appear on the printer. Figure: 1.5 shows a Model-33 Teletype, like the one I used for years. Note the yellow paper-tape reader it had on its left side. Paper tape was used similarly to punched card



Figure-1.5 Model-33 Teletype



Figure – 1.6 Alto workstation

By the 1970's, this magical kingdom in the world of computer science appeared, commonly called PARC. Actually it is Xerox PARC (PARC stands for Palo Alto Research Center) and it still exists. A group of scientists there built what was to be the future of computing: networks of “personal” computers were prototyped. Much of what you see on a computer these days, the user interface, was invented at PARC. The researchers all had computers (Altos) with high-resolution graphics displays and a pointing device (a mouse). The mouse, or "X-Y position indicator for a display system" which is what it was originally called, was invented by Doug Engelbart at SRI (Stanford Research Institute) in the early 1960's. The computers the researchers used were connected by a high-speed network (Ethernet). They used this environment that they built themselves to do all of their work. Figure: 1.6 is a picture of an Alto workstation.

The first fancy integrated user interface that was built for the Alto (that's most applicable to what I want to talk about) was Alan Kay's vision of Daybook. Alan and a few other researchers including Adele Goldberg and Dan Ingalls, built a graphically-oriented system for working with Personal Dynamic Media, a programming environment they called Smalltalk. The Smalltalk system introduced a new concept of breaking the graphical display into pieces called "windows" which held separate information. As I can fit concepts from this system into our learning, I will.

We've been doing lots of graphical output, now it's time to interact with a user - to get some input via your computer systems' GUI. In the following few sections I cover *events* that your

program can respond to. The *events* that logo supports are **key Pressed**, **key Released**, **key Typed**, **mouse Clicked**, and **mouse Moved**. I'm going to start with the mouse since it is the most fun!

1.5 Conclusion

From this chapter we knew about the history of C Programing, Graphics Design and Mouse Programing. We also know, how upgrading this programs day by day.

CHAPTER 2: BACKGROUND

2.1: Introduction

In this Chapter we discuss about our inspiration of our project. After getting inspiration we started to make this project with the help of Kawsar Ahmed. We also got help from our friends and various books and websites. In this process we are able to make such a project.

2.2: Background

We are now living in a new world. The name of this is “Information Age”. This new information world owns a close relationship with computer, which is one of the most important parts of the technology. So computer should be used in all educational be equipment firstly and should be used in all educational purposes. To computerize an important issue like Tabulated System is a very useful task to be done with the current compatibility.

There are a lot of application in computer, android and everywhere else. Frankly to speak, we decided to make a game project and that was related to sports. Finally we made this project about a football related game and that was Penalty Soccer. We talked about our idea with our instructor, Kawsar Ahmed and got approval from him.

2.3 The Idea

There are two players: one goal keeper and other the kicker. User will play as the kicker. From the user, the game will ask for the direction and the final kick. So there will be six possible directions for the kick. They are top-left, top-middle, top-right, bottom-left, bottom-middle, bottom-right. The movement of the goal keeper will be decided from three random functions. The first random value decides whether the goal keeper moves to the right side or to the left side. The other two random values decide whether the goal keeper move to the least corner of the football bar or turn to other side in the middle of movement.

If the ball passes through the goal bar and touch the net, the user will make a score. Otherwise the miss the chance to make a score. There are two animation to cheer up the user for making a score or not to able make a score.

There is also instruction for the new user as user guide. A colorful animation at the starting of the main game as logo of the game and a loading bar are also added. Thus our project meets its end.

2.4: Conclusion

In this project we try to implement our study of programing in our practical life .we hope that we will be able to do the best of our implementation.

CHAPTER 3: METHODOLOGY

3.1: Introduction

In this chapter we will discuss about different methods and functions which we used in our project. We also discuss every header files and their including functions elaborately. We also express our working procedure step by step.

3.2 Header Files

S. NO	Header Files	Description
1.	#include<conio.h>	This is console input/output header file
2.	#include<stdio.h>	This is standard input/output header file in which Input/output functions are declared
3.	#include<graphics.h>	Creates the graphics window on the screen.
4.	#include<stdlib.h>	This header file contains general functions used in C programs
5.	#include<iostream>	iostream is the header file which contains all the functions of program like cout, cin etc
6.	#include<fstream>	This header contains all function related to reading and writing data on file
7.	#include<time.h>	All time related functions are defined in this header file

Table – 3.1: List of Header Files

a) #include<conio.h>

conio.h is a C header file used mostly by MS-DOS compilers to provide console input/output. It is not part of the C standard library or ISO C, nor is it defined by POSIX. This header declares several useful library functions for performing "console input and output" from a program.

Some of its inbuilt functions are:

S.NO	Inbuilt Functions	Description
1.	clrscr()	-It is used to clear the screen
2.	cgets()	-Reads a string from the keyboard
3.	getch()	- Reads a character from keyboard
4.	getche()	- Reads a character from keyboard and echoes it to the screen
5.	kbhit()	- Determines if a keyboard key was pressed
6.	putch()	- Determines if a keyboard key was pressed
7.	cputs()	- Writes a string to the screen

Table - 3.2: Built In Functions Of conio.h

b) #include<stdio.h>

The C standard library is the standard library for the C programming language, as specified in the ANSI C standard.^[1] It was developed at the same time as the C library POSIX specification, which is a superset of it.^{[2][3]} Since ANSI C was adopted by the International,^[4] the C standard library is also called the ISO C library.

Some of its inbuilt functions are:

S.NO	Inbuilt Functions	Description
1.	printf()	This function is used to print the character, string, float, integer, octal and hexadecimal values onto the output screen
2.	scanf()	This function is used to read a character, string, and numeric data from keyboard.
3.	getc()	It reads character from file
4.	gets()	It reads line from keyboard
5.	getchar()	It reads character from keyboard

6.	puts()	It writes line to o/p screen
7.	putchar()	It writes a character to screen

Table - 3.3: Built In Functions Of stdio.h

c) **#include<graphics.h>**

This interface provides access to a simple graphics library that makes it possible to draw lines, rectangles, ovals, arcs, polygons, images, and strings on a graphical window.

Some of its inbuilt functions are:

S.NO	Inbuilt Functions	Description
1.	initGraphics() initGraphics(width, height)	-Creates the graphics window on the screen.
2.	drawArc(bounds, start, sweep) drawArc(x, y, width, height, start, sweep)	-Draws an elliptical arc inscribed in a rectangle.
3.	fillArc(bounds, start, sweep) fillArc(x, y, width, height, start, sweep)	-Fills a wedge-shaped area of an elliptical arc.
4.	drawImage(filename, pt) drawImage(filename, x, y) drawImage(filename, bounds) drawImage(filename, x, y, width, height)	-Draws the image from the specified file with its upper left corner at the specified point.
5.	getImageBounds(filename)	-Returns the bounds of the image contained in the specified file.
6.	drawLine(p0,p1) drawLine(x0, y0, x1, y1)	-Draws a line connecting the specified points.
7.	drawRect(bounds) drawRect(x, y, width, height)	-Draws the frame of a rectangle with the specified bounds.

Table - 3.4: Built In Functions of graphics.h

d) #include<stdlib.h>

stdlib.h is the header of the general purpose standard library of C programming language which includes functions involving memory allocation, process control, conversions and others. The name "stdlib" stands for "standard library".

Some of its inbuilt functions are:

S.NO	Inbuilt Functions	Description
1.	abort	-Abort Program.
2.	atexit	-Register Function to be Called at Program Exit.
3.	exit	-Exit from Program.
4.	getenv	-Get Environment String.
5.	system	-Perform Operating System Command
6.	rand	-Generate Pseudo-Random Number
7.	srand	-Seed Pseudo-Random Number Generator

Table - 3.5 Built In Functions Of stdlib.h

e) #include<iostream>

There are many header files present in a CPP Programming language. iostream is one among the header files. It contains many classes which is related to file writing, reading, input, output, string etc. It is a vast realm of classes and built in function like **stdio** header file. It is

Some of its inbuilt functions are:

S.NO	Inbuilt Functions	Description
1.	cin	Standard input stream
2.	cout	Standard output stream
3.	endl	Insert newline and flush
4.	cerr	Standard output stream for errors

5.	clog	Standard output stream for logging
6.	true	It returns 1
7.	false	It returns 0

Table - 3.6 Built In Functions Of iostream

f) **#include<fstream>**

The fstream header file consists of three function: ofstream, ifstream, fstream. All these function are used to manipulate data in the file. These function allows to write something on a file or read from a file. This is

Some of its inbuilt functions are:

S.NO	Inbuilt Functions	Description
1.	ofstream	This data type represents the output file stream and is used to create files and to write information to files.
2.	ifstream	This data type represents the input file stream and is used to read information from files.
3.	fstream	This data type represents the file stream generally, and has the capabilities of both ofstream and ifstream which means it can create files, write information to files, and read information from files.

Table - 3.7 Built In Functions Of fstream

g) **#include<time.h>**

To access date and time related functions and structures, you would need to include <ctime> header file in your C++ program. There are four time-related types: **clock_t**, **time_t**, **size_t**, and **tm**. The types - clock_t, size_t and time_t are capable of representing the system time and date as some sort of integer.

The structure type **tm** holds the date and time in the form of a C structure. [5]

Some of its inbuilt functions are:

S.NO	Inbuilt Functions	Description
1.	time_t time(time_t *time)	This returns the current calendar time of the system in number of seconds elapsed since January 1, 1970. If the system has no time, .1 is returned
2.	char *ctime(const time_t *time)	This returns a pointer to a string of the form <i>day month year hours : minutes : seconds year\n\0</i> .
3.	struct tm *localtime(const time_t *time)	This returns a pointer to the tm structure representing local time.
4.	clock_t clock(void)	This returns a value that approximates the amount of time the calling program has been running. A value of .1 is returned if the time is not available.
5.	time_t mktime(struct tm *time)	This returns the calendar-time equivalent of the time found in the structure pointed to by time

Table - 3.8 Built In Functions Of time.h

3.3 Elaboration of Code

1. First we created a graphics mode by using Graphics methods.

```

24  {
25      int gd=DETECT, gm;
26      initgraph(&gd, &gm, "C:\\TC\\BGI");
27  }
```

2. Then we created a menu to show the overview of this project.

```

11  int num_goal=0, countt=0;
12  char score[100];
13
14  void body();
15  int middle(int a, int random, int ran1, int ran2);
16  int left(int a, int random, int ran1, int ran2);
17  int right(int a, int random, int ran1, int ran2);
18  void dis_score();
19  void goal();
20  void no_goal();
21  void player_name(int x);
```

3. Using rectangle(), bar(), line(), circle() function we made our main structure of the game which includes players, football, goal bar, goal net, field etc.


```

253 //Net
254 setcolor(LIGHTCYAN);
255 rectangle(191,50,449,159);
256 setfillstyle(HATCH_FILL,LIGHTCYAN);
257 floodfill(200,100,LIGHTCYAN);
258
259 //Border
260 setcolor(WHITE);
261 line(0,160,185,160);
262 line(455,160,getmaxx(),160);
263
264 //Penalty Box Line
265 line(530,160,530,230);
266 line(531,160,531,231);
267 line(120,160,120,230);

```

4. Then we build a home menu for our game.

```

53 setcolor(LIGHTBLUE);
54 settextstyle(3,HORIZ_DIR,1);
55 for(i=0; i<250; i++)
56 {
57     outtextxy(-10+i,190,"Press P to Play");
58     outtextxy((getmaxx()-150)-i,215,"Press I to Read Instruction");
59     outtextxy(-10+i,250,"Press Esc to Exit");
60     outtextxy(10,(getmaxy()+185)-i,"Do Not Bother Pressing Other Keys");
61     delay(10);
62 }
63 delay(100);
64 setcolor(LIGHTMAGENTA);
65 settextstyle(5,HORIZ_DIR,2);
66 outtextxy(370,getmaxy()-55,"Developed by Jahid Tanvir");
67 outtextxy(420,getmaxy()-33,"& Abu Saleh Shipon");

```

5. Then we also include instruction for users.

```

211 setcolor(LIGHTGRAY);
212 settextstyle(3,HORIZ_DIR,1);
213 outtextxy(105,155,"Press 7 or 1 to kick to the left upper corner and left down corner");
214 outtextxy(130,180,"Press 8 or 2 to kick to the middle upper and middle down");
215 outtextxy(105,205,"Press 9 or 3 to kick to the left right corner and right down corner");
216 outtextxy(179,235,"And Finally Press 5 to make the KICK!!!!");
217 setcolor(RED);
218 outtextxy(135,310,"**Do Not Bother Pressing Other Keys Whilew Playing**");
219
220 setcolor(LIGHTMAGENTA);
221 outtextxy(390,getmaxy()-35,"Press Anykey for Home Screen");
222 getch();

```

6. Then we created a welcome logo at the very beginning of game .

```

75      //Logo
76      int k=0;
77      for(int i=1; i<=16; i++)
78      {
79          int j=i%13;
80          setfillstyle(CLOSE_DOT_FILL,j);
81          bar(320,50,410,190);
82          setfillstyle(CLOSE_DOT_FILL,j+1);
83          bar(180,110,320,190);
84          setfillstyle(CLOSE_DOT_FILL,j+2);
85          bar(230,190,319,325);
86          setfillstyle(CLOSE_DOT_FILL,j+3);
87          bar(319,190,460,275);
88          //Loading Bar
89          setcolor(RED);
90          setfillstyle(4,RED);
91          bar(170,370,175+k,400);
92          setcolor(LIGHTBLUE);
93          settextstyle(3,HORIZ_DIR,1);
94          outtextxy(getmaxx()/2-17,405,"Loading...");
95          k+=20;
96          //delay(35);
97          //cleardevice();
98          delay(180);
99          cleardevice();

```

7. After this we made a process to enter in our game which is consist of three functions: middle(), left() & right().

```

175      kick=getch();
176
177      if(kick==53)
178      {
179          if((dir==50 || dir==56) && kick==53)
180          {
181              num_goal=middle(dir,r,r1,r2);
182          }
183          else if((dir==49 || dir==55) && kick==53)
184          {
185              num_goal=left(dir,r,r1,r2);
186          }
187          else if((dir==51 || dir==57) && kick==53)
188          {
189              num_goal=right(dir,r,r1,r2);
190          }
191      }

```

8. Then we use three random functions for goal keeper's movement.

```

102
103      while(1)    ///Main Gaming Part
104      {
105          srand (time(NULL));
106          int r = rand()%2;
107          int r1 = rand()%2;
108          int r2 = rand()%2;
109          int dir,kick;

```

9. Finally we use a function to store gamers history into a file.

```

693 void player_name(int x)
694 {
695     time_t now = time(0);
696     char* play_time = ctime(&now);
697
698     char pl_name[100];
699     cout<<"Enter Your Name : "<<endl;
700     gets(pl_name);
701
702     ofstream out;
703
704     out.open("Game_History.txt",ios::app);
705     out << pl_name << endl;
706     out << "Goal Number : "<<x<<endl;
707     out << play_time << endl;
708
709     out.close();
710     cout<<"Return to The Field "<<endl;
711

```

3.5 Conclusion

In this chapter we discussed about different methods and functions which we used in our project. We also discussed every header files and their including functions elaborately. We also expressed our working procedure step by step.

CHAPTER 4: RESULT OF PROJECT

4.1: Introduction

In this chapter we have represented our experimental results. This will simplify our game to understand easily.

4.2: Welcome to Game

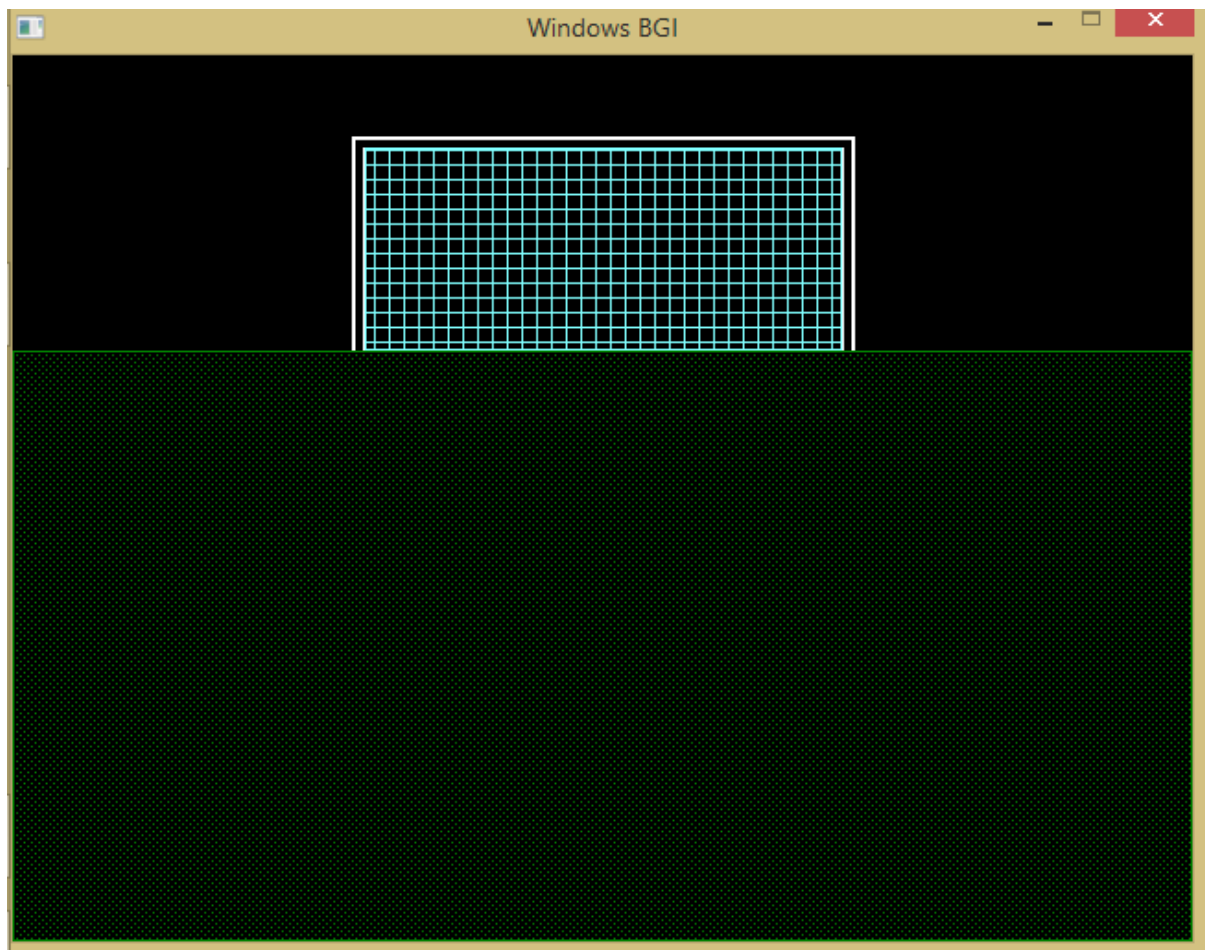


Figure 4.1(a): Welcome Page

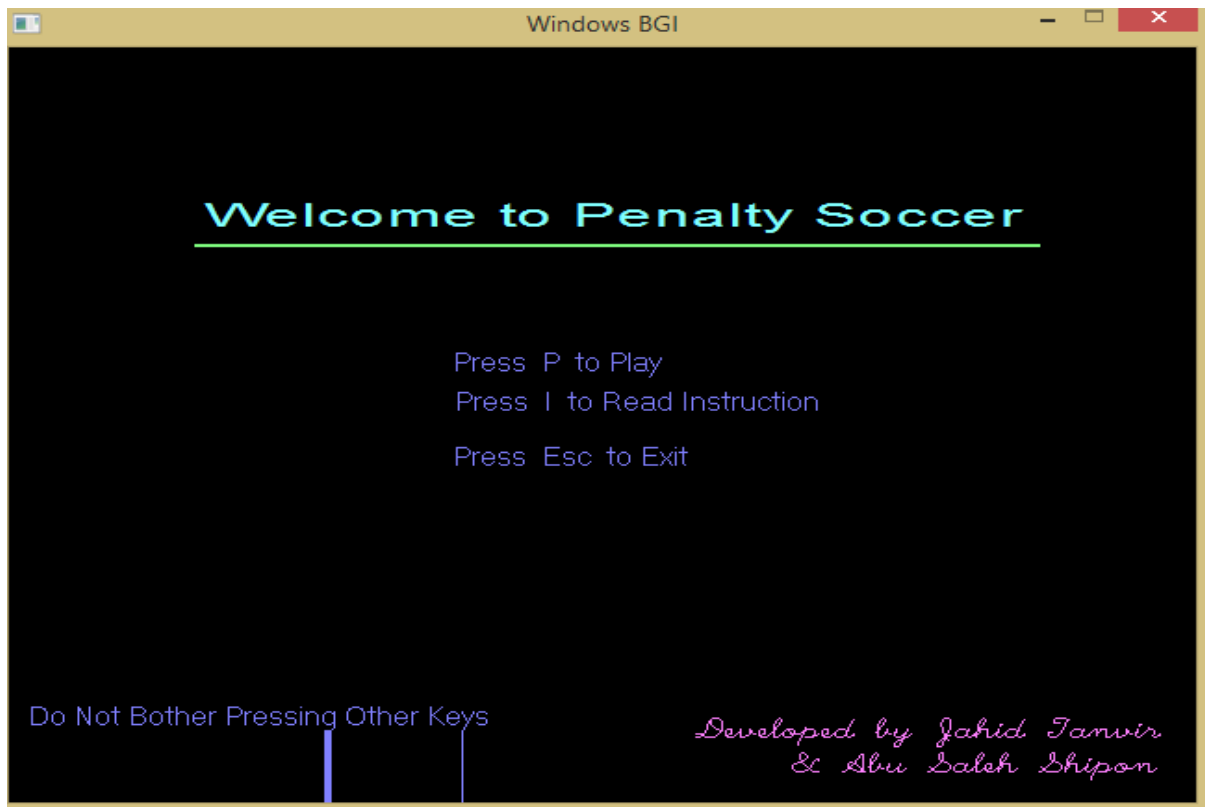


Figure 4.1(b): Welcome Page

4.3 Instructions & Loading Bar

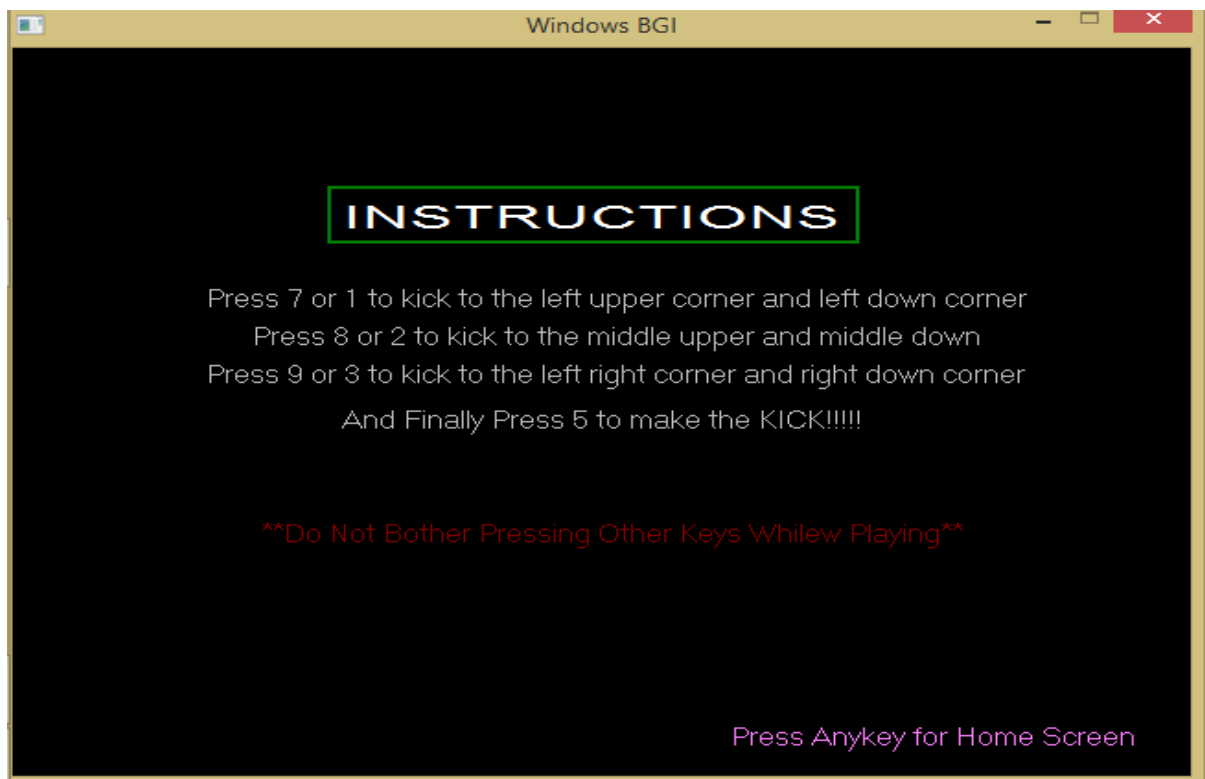


Figure - 4.2(a): Instructions

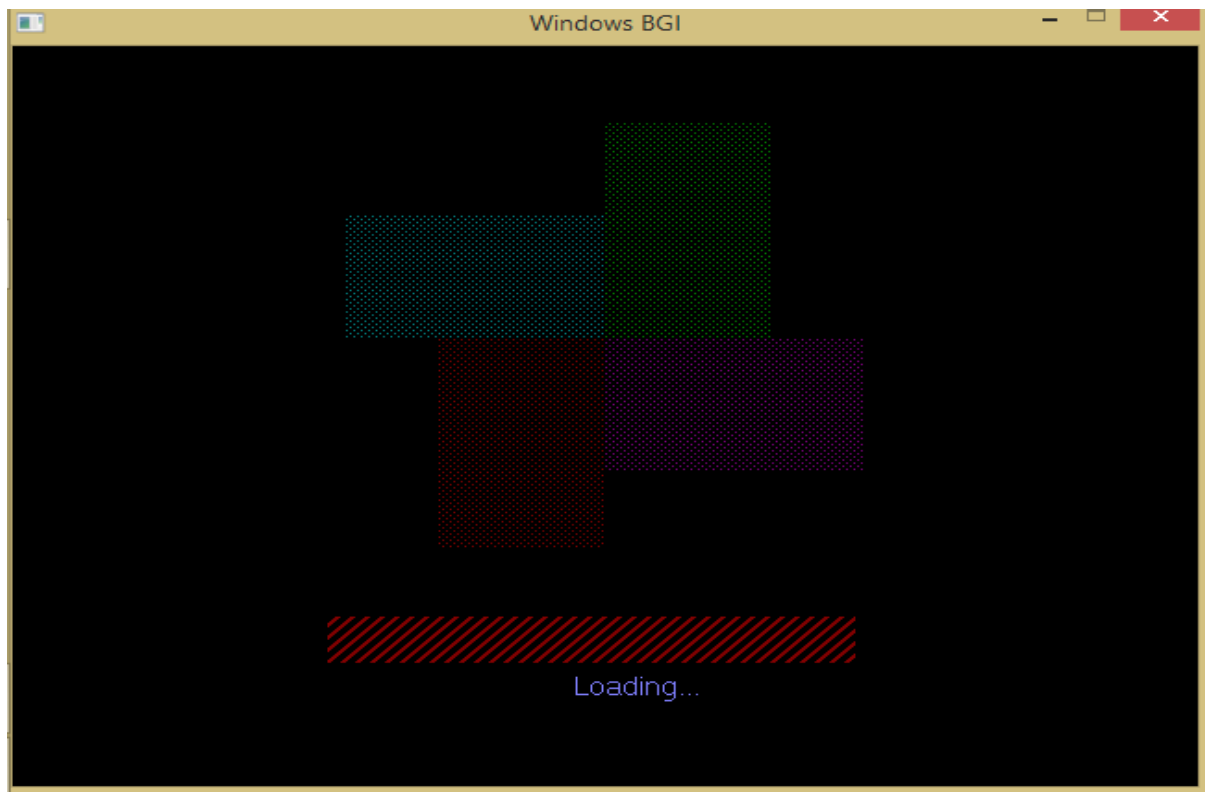


Figure - 4.2(b): Loading Bar

4.4 Scoring

Let user wishes to kick to the left upper corner or to the right bottom or to the middle upper side.



Figure - 4.3: Scoring

4.5 Goal & No Goal Animation



Figure - 4.4(a): Goal Animation

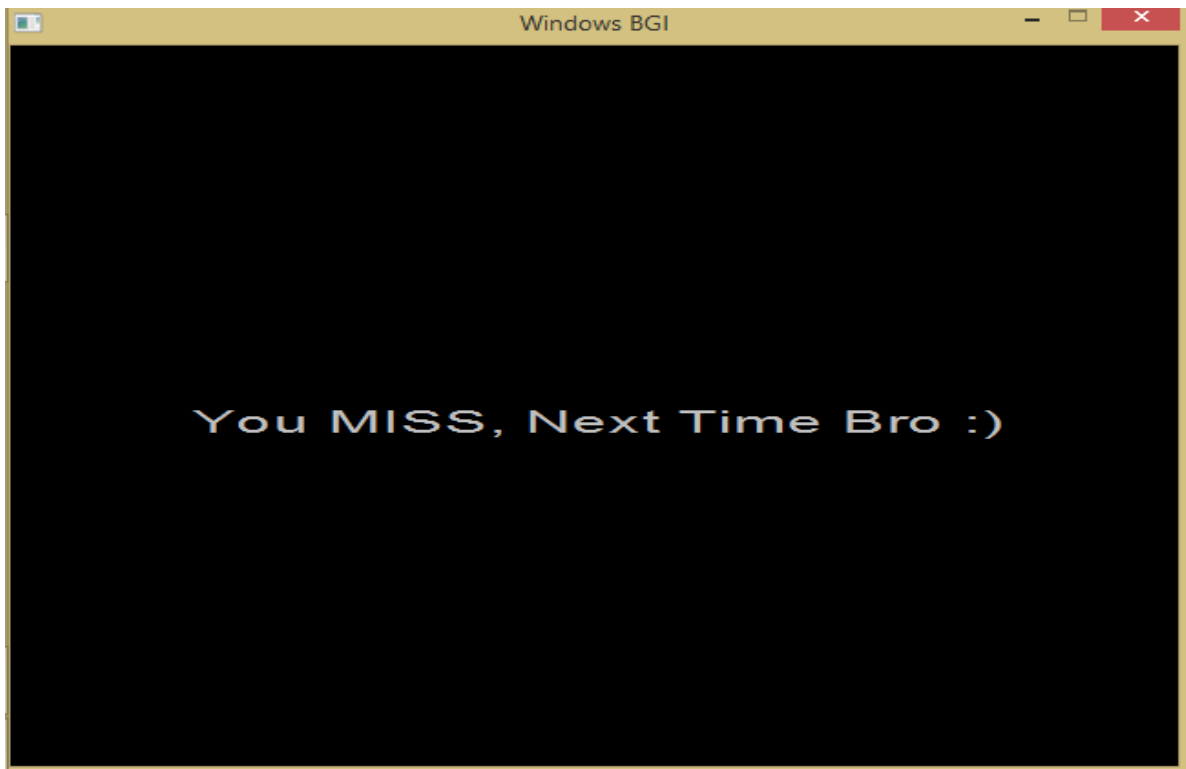


Figure - 4.4(b): No Goal Animation

4.6 Game History in File

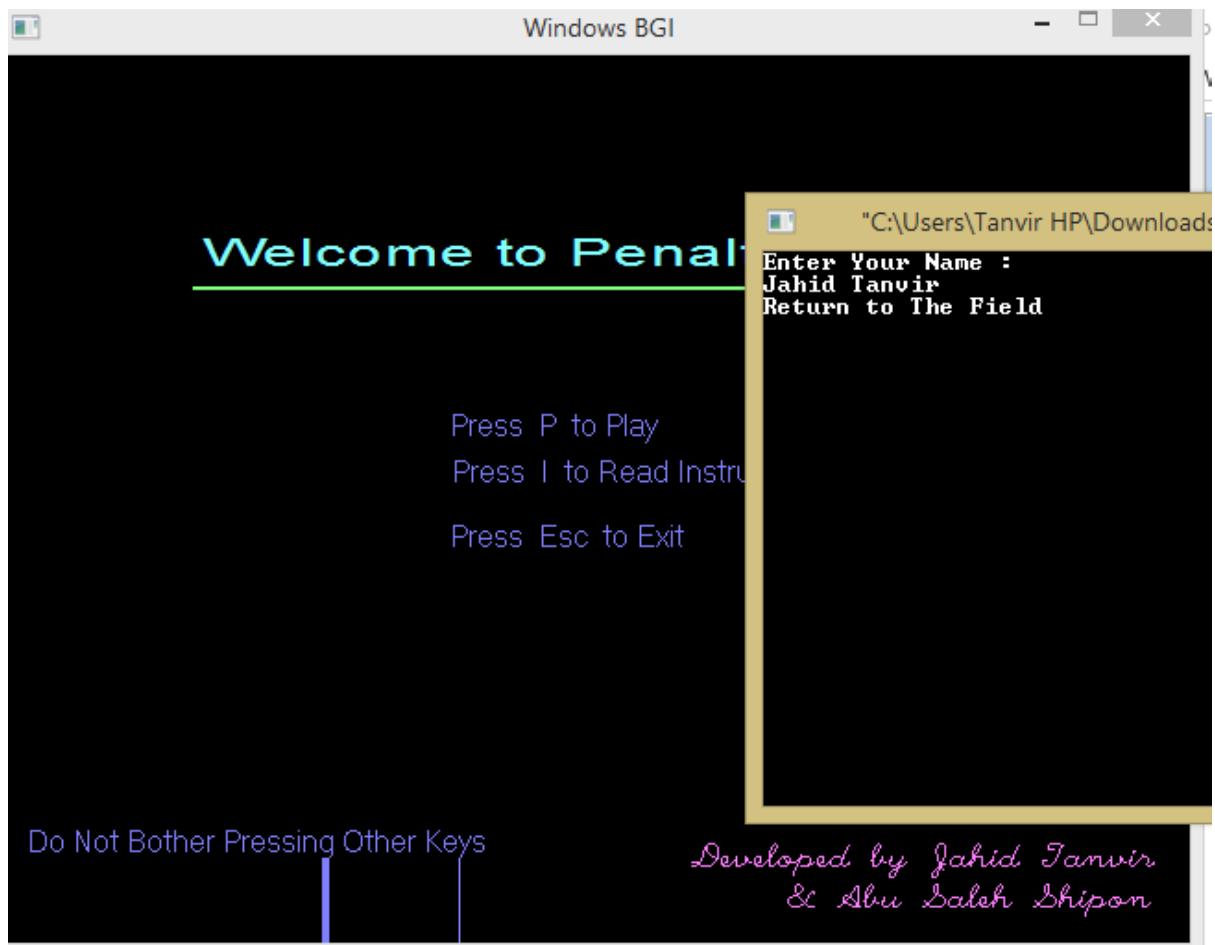


Figure - 4.5: Game History in File

4.7 Conclusion

In this chapter we represented the result of our project.

CHAPTER 5: CONCLUTION

The project is successful thanks to the assistance of our honorable guide teachers, seniors, friends. We are glad that the project is finally finished. We hope all our efforts and hard works will pay off end the end.

REFERENCES

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2. "The GNU C Library – Introduction". *Gnu.org*. Retrieved 2013-12-05.
3. "Difference between C standard library and C POSIX library". *stackoverflow.com*. 2012. Retrieved 2016-04-10.
4. "C Standards". Kiel. Retrieved 24 November 2011.
5. https://en.wikibooks.org/wiki/C_Programming/C_Reference/time.h

1. List of Header Files:

- a) `#include<stdio.h>`
- b) `#include<graphics.h>`
- c) `#include<stdlib.h>`
- d) `#include<conio.h>`
- e) `#include<time.h>`
- f) `#include<iostream>`
- g) `#include<fstream>`

2. Source Code:

```
#include<stdio.h>
#include<graphics.h>
#include<stdlib.h>
#include<conio.h>
#include<time.h>
#include<iostream>
#include<fstream>

using namespace std;

int num_goal=0, countt=0;
char score[100];

void body();
int middle(int a, int random, int ran1, int ran2);
int left(int a,int random, int ran1, int ran2);
int right(int a,int random, int ran1, int ran2);
void dis_score();
void goal();
void no_goal();
void player_name(int x);

int main()
{
    int gd=DETECT,gm;
    initgraph(&gd,&gm, "C:\\TC\\BGI");

    while(1)
    {
        int gk_move=0,pl_move=0,movement=0, i=0,ch;
        int bx=325,by=345, gx1=305,gy1=100,gx2=335,gy2=140;
        //int num_goal=0;

        body();

        //Field
        setcolor(GREEN);
        rectangle(0,160,getmaxx(),getmaxy());
        setfillstyle(CLOSE_DOT_FILL, GREEN);
        floodfill(1,390, GREEN);

        delay(1300);
        cleardevice();
        Home:
        cleardevice();
        setcolor(LIGHTCYAN);
        settextstyle(GOTHIC_FONT,HORIZ_DIR,3);
        outtextxy(105,95,"Welcome to Penalty Soccer");
        setcolor(LIGHTGREEN);
        line(100,125,555,125);
```

```

line(100,126,555,126);
delay(500);
setcolor(LIGHTBLUE);
settextstyle(3,HORIZ_DIR,1);
for(i=0; i<250; i++)
{
    outtextxy(-10+i,190,"Press P to Play");
    outtextxy((getmaxx()-150)-i,215,"Press I to Read Instruction");
    outtextxy(-10+i,250,"Press Esc to Exit");
    outtextxy(10,(getmaxy()+185)-i,"Do Not Bother Pressing Other Keys");
    delay(10);
}
delay(100);
setcolor(LIGHTMAGENTA);
settextstyle(5,HORIZ_DIR,2);
outtextxy(370,getmaxy()-55,"Developed by Jahid Tanvir");
outtextxy(420,getmaxy()-33,"& Abu Saleh Shipon");

```

again1:

```

ch=getch();

if(ch==80 || ch==112) //For Playing
{
    cleardevice();
    //Logo
    int k=0;
    for(int i=1; i<=16; i++)
    {
        int j=i%13;
        setfillstyle(CLOSE_DOT_FILL,j);
        bar(320,50,410,190);
        setfillstyle(CLOSE_DOT_FILL,j+1);
        bar(180,110,320,190);
        setfillstyle(CLOSE_DOT_FILL,j+2);
        bar(230,190,319,325);
        setfillstyle(CLOSE_DOT_FILL,j+3);
        bar(319,190,460,275);
        //Loading Bar
        setcolor(RED);
        setfillstyle(4,RED);
        bar(170,370,175+k,400);
        setcolor(LIGHTBLUE);
        settextstyle(3,HORIZ_DIR,1);
        outtextxy(getmaxx()/2-17,405,"Loading...");
        k+=20;
        //delay(35);
        //cleardevice();
        delay(180);
        cleardevice();
    }
    cleardevice();
}

```

```

while(1) ///Main Gaming Part
{
    srand (time(NULL));
    int r = rand()%2;
    int r1 = rand()%2;
    int r2 = rand()%2;
    int dir,kick;

    //void dis_score();
    //Score
    memset(score,0,100);
    sprintf(score, "Goal : %d", num_goal);
    setcolor(LIGHTGREEN);
    settxtstyle(GOTHIC_FONT, HORIZ_DIR, 1);
    outtextxy(30,10,score);

    setcolor(WHITE);
    body();

    //Goalkeeper
    circle(320+gk_move,90,10);
    setfillstyle(SOLID_FILL,WHITE);
    floodfill(325+gk_move,95,WHITE);
    setfillstyle(SOLID_FILL,YELLOW);
    bar(gx1+gk_move,gy1,gx2+gk_move,gy2);
    setfillstyle(SOLID_FILL,BLUE);
    bar(308+gk_move,140,318+gk_move,158);
    bar(322+gk_move,140,332+gk_move,158);
    bar(292+gk_move,103,305+gk_move,113);
    bar(335+gk_move,103,348+gk_move,113);
    //Field
    setcolor(GREEN);
    rectangle(0,160,getmaxx(),getmaxy());
    setfillstyle(CLOSE_DOT_FILL,GREEN);
    floodfill(1,390,GREEN);
    setcolor(WHITE);
    circle(bx,by-movement*2,10);
    setfillstyle(SOLID_FILL,WHITE);
    floodfill(bx,by-movement*2,WHITE);
    //Player & Kick
    circle(380-pl_move,315-pl_move,10);
    circle(376-pl_move,313-pl_move,3);
    circle(384-pl_move,313-pl_move,3);
    setfillstyle(SOLID_FILL,LIGHTBLUE);
    bar(365-pl_move,325-pl_move,395-pl_move,365-pl_move);
    setfillstyle(SOLID_FILL,RED);
    bar(368-pl_move,365-pl_move,378-pl_move,385-pl_move);
    bar(382-pl_move,365-pl_move,392-pl_move,385-pl_move);
    bar(348-pl_move,328-pl_move,365-pl_move,340-pl_move);
    bar(395-pl_move,328-pl_move,413-pl_move,340-pl_move);

```

```

again2:
    dir=getch();

    if(dir==27)
    {
        cleardevice();
        for(int i=1; i<=16; i++)
        {
            setcolor(i);
            settextstyle(GOTHIC_FONT,HORIZ_DIR,3);
            outtextxy(100,getmaxy()/2,"Please Open Other Console");
            delay(170);
            cleardevice();
        }
        player_name(num_goal);
        goto Home;
    }

    else if(dir==50 || dir==56 || dir==49 || dir==55 || dir==51 || dir==57)
    {
again3:
        kick=getch();

        if(kick==53)
        {
            if((dir==50 || dir==56) && kick==53)
            {
                num_goal=middle(dir,r,r1,r2);
            }
            else if((dir==49 || dir==55) && kick==53)
            {
                num_goal=left(dir,r,r1,r2);
            }
            else if((dir==51 || dir==57) && kick==53)
            {
                num_goal=right(dir,r,r1,r2);
            }
        }
        else
            goto again3;
    }
    else
        goto again2;
}

else if(ch==73 || ch==105) //For Instruction
{
    delay(100);
    cleardevice();
}

```

```

setcolor(WHITE);
settextstyle(GOTHIC_FONT,HORIZ_DIR,3);
outtextxy(180,100,"INSTRUCTIONS");
setcolor(GREEN);
rectangle(172,92,458,127);
rectangle(171,91,459,128);

setcolor(LIGHTGRAY);
settextstyle(3,HORIZ_DIR,1);
outtextxy(105,155,"Press 7 or 1 to kick to the left upper corner and left down corner");
outtextxy(130,180,"Press 8 or 2 to kick to the middle upper and middle down");
outtextxy(105,205,"Press 9 or 3 to kick to the left right corner and right down corner");
outtextxy(179,235,"And Finally Press 5 to make the KICK!!!!");
setcolor(RED);
outtextxy(135,310,"**Do Not Bother Pressing Other Keys Whilew Playing**");

setcolor(LIGHTMAGENTA);
outtextxy(390,getmaxy()-35,"Press Anykey for Home Screen");
getch();
goto Home;
}
else if(ch==27)
    exit(0);
else
    goto again1;

}

getch();
closegraph();
return 0;
}

void body() ///Always used this figure
{
    //Football bar
    setcolor(WHITE);
    line(184,44,456,44);
    line(185,45,455,45);
    line(184,44,184,161);
    line(185,45,185,160);
    line(455,45,455,160);
    line(456,44,456,161);

    //Main Body
    line(190,50,450,50);
    line(190,50,190,160);
    line(450,50,450,160);

    //Net
    setcolor(LIGHTCYAN);

```



```

rectangle(191,50,449,159);
setfillstyle(HATCH_FILL,LIGHTCYAN);
floodfill(200,100,LIGHTCYAN);

//Border
setcolor(WHITE);
line(0,160,185,160);
line(455,160,getmaxx(),160);

//Penalty Box Line
line(530,160,530,230);
line(531,160,531,231);
line(120,160,120,230);
line(119,160,119,231);
line(119,230,530,230);
line(119,231,531,231);

line(10,390,getmaxx()-10,390);
line(10,391,getmaxx()-10,391);
line(10,160,10,390);
line(9,160,9,391);
line(getmaxx()-10,160,getmaxx()-10,390);
line(getmaxx()-11,160,getmaxx()-11,391);

arc(getmaxx()/2,390,182,358,85);
arc(getmaxx()/2,389,181,359,85);
}

int middle(int a, int random, int ran1, int ran2) ///Middle Side
{
    int movement=0, gk_move=0, pl_move=0, flag1=0, flag2=0;
    int i=0, n=0, bx=325, by=345, gx1=305, gy1=100, gx2=335, gy2=140;
    if(a==50)
        n=85;
    else
        n=110;

    for(i=0; i<=n; i++)
    {
        int m1=((gx1+gk_move)+(gx2+gk_move))/2, m2=(gy1+gy2)/2;

        dis_score();
        body();

        //Right or Left Movement
        if(i==0)
        {
            if(random==1)
            {
                gk_move+=2;

```

```

        flag1=0;
    }
    else
    {
        gk_move-=2;
        flag1=1;
    }
}

//Dodging
if(m1<270 && ran1==1)
    flag1=0;
else if(m1>374 && ran2==1)
    flag1=1;

//Goalkeeper Movement Conditions Checking
if(m1<219)
    flag1=0;
else if(m1>428)
    flag1 = 1;

//Goalkeeper
circle(320+gk_move,90,10);
setfillstyle(SOLID_FILL,WHITE);
floodfill(320+gk_move,90,WHITE);

setfillstyle(SOLID_FILL,YELLOW);
bar(gx1+gk_move,gy1, gx2+gk_move,gy2);
setfillstyle(SOLID_FILL,BLUE);
//Legs
bar(308+gk_move,140,318+gk_move,158);
bar(322+gk_move,140,332+gk_move,158);
//Hands
bar(292+gk_move,103,305+gk_move,113);
bar(335+gk_move,103,348+gk_move,113);

if(flag1==0)
    gk_move+=2;
else
    gk_move-=2;

//Field
setcolor(GREEN);
rectangle(0,160,getmaxx(),getmaxy());
setfillstyle(CLOSE_DOT_FILL,GREEN);
floodfill(1,390,GREEN);

//Football & Movement
if(flag2<20)
    pl_move++;
else

```

```

{
    pl_move = pl_move;
    movement=i-19;
}
setcolor(WHITE);
circle(bx,by-(movement*3),10);
setfillstyle(SOLID_FILL,WHITE);
floodfill(bx,by-(movement*3),WHITE);

//Player & Kick
circle(380-pl_move,315-pl_move,10);
circle(376-pl_move,313-pl_move,3);
circle(384-pl_move,313-pl_move,3);

setfillstyle(SOLID_FILL,LIGHTBLUE);
bar(365-pl_move,325-pl_move,395-pl_move,365-pl_move);
setfillstyle(SOLID_FILL,RED);
bar(368-pl_move,365-pl_move,378-pl_move,385-pl_move);
bar(382-pl_move,365-pl_move,392-pl_move,385-pl_move);

bar(348-pl_move,328-pl_move,365-pl_move,340-pl_move);
bar(395-pl_move,328-pl_move,413-pl_move,340-pl_move);
flag2++;

if( (bx>=m1-35&&bx<=m1+35) && (by-(movement*3)<=m2+45&&by-(movement*3)>=m2-45) )
{
    no_goal();
    break;
}

delay(30);
if(i<n+1)
    cleardevice();
}
if(i==n+1)
{
    countt++;
    goal();
}

return (countt);
}

```

```

int left(int a,int random, int ran1, int ran2) ///Left Side
{
    int movement=0, gk_move=0,pl_move=0, flag1=0,flag2=0;
    int i=0,n=0, bx=325,by=345, gx1=305,gy1=100,gx2=335,gy2=140;

    if(a==49)
        n=83;

```

```

else
    n=100;

for(i=0; i<=n; i++)
{
    int m1=((gx1+gk_move)+(gx2+gk_move))/2, m2=(gy1+gy2)/2;

    dis_score();
    body();

    //Right or Left Movement
    if(i==0)
    {
        if(random==1)
        {
            gk_move+=2;
            flag1=0;
        }
        else
        {
            gk_move-=2;
            flag1=1;
        }
    }
}

//Dodging
if(m1<270 && ran1==1)
    flag1=0;
else if(m1>374 && ran2==1)
    flag1=1;

//Goalkeeper Movement Conditions Checking
if(m1<219)
    flag1=0;
else if(m1>428)
    flag1 = 1;

//Goalkeeper
circle(320+gk_move,90,10);
setfillstyle(SOLID_FILL,WHITE);
floodfill(325+gk_move,95,WHITE);

setfillstyle(SOLID_FILL,YELLOW);
bar(gx1+gk_move,gy1,gx2+gk_move,gy2);
setfillstyle(SOLID_FILL,BLUE);
//Legs
bar(308+gk_move,140,318+gk_move,158);
bar(322+gk_move,140,332+gk_move,158);
//Hands
bar(292+gk_move,103,305+gk_move,113);
bar(335+gk_move,103,348+gk_move,113);

```

```

if(flag1==0)
    gk_move+=2;
else
    gk_move-=2;

//Field
setcolor(GREEN);
rectangle(0,160,getmaxx(),getmaxy());
setfillstyle(CLOSE_DOT_FILL, GREEN);
floodfill(1,390, GREEN);

//Football & Movement
if(flag2<18)
    pl_move++;
else
{
    pl_move = pl_move;
    movement=i-17;
}
setcolor(WHITE);
circle(bx-(movement*1.5),by-(movement*3),10);
setfillstyle(SOLID_FILL, WHITE);
floodfill(bx-(movement*1.5),by-(movement*3), WHITE);

//Player & Kick
circle(380-pl_move,315-pl_move,10);
circle(376-pl_move,313-pl_move,3);
circle(384-pl_move,313-pl_move,3);

setfillstyle(SOLID_FILL, LIGHTBLUE);
bar(365-pl_move,325-pl_move,395-pl_move,365-pl_move);
setfillstyle(SOLID_FILL, RED);
bar(368-pl_move,365-pl_move,378-pl_move,385-pl_move);
bar(382-pl_move,365-pl_move,392-pl_move,385-pl_move);

bar(348-pl_move,328-pl_move,365-pl_move,340-pl_move);
bar(395-pl_move,328-pl_move,413-pl_move,340-pl_move);
flag2++;

if( (bx-(movement*1.5)>=m1-35&&bx-(movement*1.5)<=m1+35) && (by-
(movement*3)<=m2+45&&by-(movement*3)>=m2-45) )
{
    no_goal();
    break;
}

delay(30);
if(i<n+1)
    cleardevice();
}

```

```

    if(i==n+1)
    {
        countt++;
        goal();
    }

    return (countt);
}

int right(int a,int random, int ran1, int ran2) ///Right Side
{
    int movement=0, gk_move=0,pl_move=0, flag1=0,flag2=0;
    int i=0,n=0, bx=325,by=345, gx1=305,gy1=100,gx2=335,gy2=140;

    if(a==51)
        n=80;
    else
        n=100;

    for(i=0; i<=n; i++)
    {
        int m1=((gx1+gk_move)+(gx2+gk_move))/2, m2=(gy1+gy2)/2;

        dis_score();
        body();

        ///Right or Left Movement
        if(i==0)
        {
            if(random==1)
            {
                gk_move+=2;
                flag1=0;
            }
            else
            {
                gk_move-=2;
                flag1=1;
            }
        }

        ///Dodging
        if(m1<270 && ran1==1)
            flag1=0;
        else if(m1>374 && ran2==1)
            flag1=1;

        ///Goalkeeper Movement Conditions Checking
        if(m1<219)
            flag1=0;

```

```

else if(m1>428)
    flag1 = 1;

//Goalkeeper
circle(320+gk_move,90,10);
setfillstyle(SOLID_FILL,WHITE);
floodfill(325+gk_move,95,WHITE);

setfillstyle(SOLID_FILL,YELLOW);
bar(gx1+gk_move,gy1,gx2+gk_move,gy2);
setfillstyle(SOLID_FILL,BLUE);
//Legs
bar(308+gk_move,140,318+gk_move,158);
bar(322+gk_move,140,332+gk_move,158);
//Hands
bar(292+gk_move,103,305+gk_move,113);
bar(335+gk_move,103,348+gk_move,113);

if(flag1==0)
    gk_move+=2;
else
    gk_move-=2;

//Field
setcolor(GREEN);
rectangle(0,160,getmaxx(),getmaxy());
setfillstyle(CLOSE_DOT_FILL,GREEN);
floodfill(1,390,GREEN);

//Football & Movement
if(flag2<18)
    pl_move++;
else
{
    pl_move = pl_move;
    movement=i-17;
}
setcolor(WHITE);
circle(bx+(movement*1.5),by-(movement*3),10);
setfillstyle(SOLID_FILL,WHITE);
floodfill(bx+(movement*1.5),by-(movement*3),WHITE);

//Player & Kick
circle(380-pl_move,315-pl_move,10);
circle(376-pl_move,313-pl_move,3);
circle(384-pl_move,313-pl_move,3);

setfillstyle(SOLID_FILL,LIGHTBLUE);
bar(365-pl_move,325-pl_move,395-pl_move,365-pl_move);
setfillstyle(SOLID_FILL,RED);
bar(368-pl_move,365-pl_move,378-pl_move,385-pl_move);

```

```

bar(382-pl_move,365-pl_move,392-pl_move,385-pl_move);

bar(348-pl_move,328-pl_move,365-pl_move,340-pl_move);
bar(395-pl_move,328-pl_move,413-pl_move,340-pl_move);
flag2++;

if( (bx+(movement*1.5)>=m1-40&&bx+(movement*1.5)<=m1+40) && (by-
(movement*3)<=m2+45&&by-(movement*3)>=m2-45) )
{
    no_goal();
    break;
}

delay(30);
if(i<n+1)
    cleardevice();
}
if(i==n+1)
{
    countt++;
    goal();
}

return (countt);
}

void dis_score()
{
    //Score
    memset(score,0,100);
    sprintf(score, "Goal : %d", num_goal);
    setcolor(LIGHTGREEN);
    settextstyle(GOTHIC_FONT, HORIZ_DIR, 1);
    outtextxy(30,10,score);
}

void goal()
{
    cleardevice();
    for(int j=5; j<=16; j++)
    {
        setcolor(j);
        circle(getmaxx()/2,getmaxy()/2, 150);
        circle(getmaxx()/2,getmaxy()/2, 149);
        circle(getmaxx()/2,getmaxy()/2, 148);
        circle(getmaxx()/2-70,getmaxy()/2-55, 25);
        circle(getmaxx()/2-70,getmaxy()/2-57, 5);
        circle(getmaxx()/2+70,getmaxy()/2-55, 25);
        circle(getmaxx()/2+70,getmaxy()/2-57, 5);
        circle(getmaxx()/2,getmaxy()/2+20, 15);
    }
}

```



```

    arc(getmaxx()/2,getmaxy()/2+40, 195,345, 55);
    arc(getmaxx()/2-110,getmaxy()/2-35, 102,223, 55);
    arc(getmaxx()/2-111,getmaxy()/2-35, 101,224, 55);
    arc(getmaxx()/2-112,getmaxy()/2-35, 100,225, 55);
    arc(getmaxx()/2+110,getmaxy()/2-35, 318,76, 55);
    arc(getmaxx()/2+111,getmaxy()/2-35, 317,77, 55);
    arc(getmaxx()/2+112,getmaxy()/2-35, 316,78, 55);

    settextstyle(GOTHIC_FONT,HORIZ_DIR,3);
    outtextxy(getmaxx()/2-160,30,"GOAL GOAL GOAL");

    delay(200);
    cleardevice();
}
return;
}

void no_goal()
{
    cleardevice();
    for(int j=0; j<16; j++)
    {
        setcolor(j);

        settextstyle(GOTHIC_FONT,HORIZ_DIR,3);
        outtextxy(100,getmaxy()/2,"You MISS, Next Time Bro :) ");
        delay(200);
        cleardevice();
    }
    return;
}

void player_name(int x)
{
    time_t now = time(0);
    char* play_time = ctime(&now);

    char pl_name[100];
    cout<<"Enter Your Name : "<<endl;
    gets(pl_name);

    ofstream out;

    out.open("Game_History.txt",ios::app);
    out << pl_name << endl;
    out << "Goal Number : "<<x<<endl;
    out << play_time << endl;
    out.close();
    cout<<"Return to The Field "<<endl;
    return;
}

```