# BATTLESHIP

**Project Title:** BATTLESHIP

**Project Handler:**

- o **MD Mehedi Hasan** (ID: 17182103274)
- o **Adit Ishraq** (ID: 17182103295)
- o **Ruma Akter** (ID: 17182103285)

**Instructor:**
**Hisham Siddique,**
Lecturer, Dept. of CSE (BUBT)

**Project Duration:** 2 months.

**Amount Requested:** None.

**Objective of The Project:**

- To create a project (console game) using **C/C++** programming language and their features.

- To implement features like control statement, conditional statement, 2D array, loops statement, goto statement etc.

- To make the program easy while running it.

- To concise the memory of program as far as possible.

- To get an idea about making a simple project using **C and C++.**

- To be able to solve problems by Compiling and Debugging.

**Project Goals:**

- ➢ User friendly
- ➢ Reduced cost
- ➢ Less effort
- ➢ Easy maintenance

**Project Implementation and Management Plan:**

- **Expected project results**

System will be easy to use, user friendly environment, very little maintenance cost, runnable in any supported device (High, medium and low end device).

## Project Monitoring:

Project will be monitored to ensure that activities occur as planned. Appropriate corrective action will be taken if required.

## Hard Ware Requirement:

Intel® Pentiam® CPU B950 @2.10 GHz

## Soft Ware Requirement:

- ✓ Windows 10
- ✓ Code blocks

## Game Rules:

This is a console base two player game. Two player can place their ship on a [10][10] grid and destroy them respectively. The player who can destroy more ship with less bomb will be declared as winner.

## Code and Functions Details:

**Function:** In this game, most of function are built in c and c++. There is only one self-created function named delay().

```cpp
using namespace std;
void delay(clock_t a)
{
    clock_t start;
    start = clock();
    while(clock()-start<a)
    {

    }
}
```

This function used to delay the console screening time. It used the system time.

**Header File:** This game is made with c and c++ language. The used header file are

#include <stdio.h>

#include <iostream>

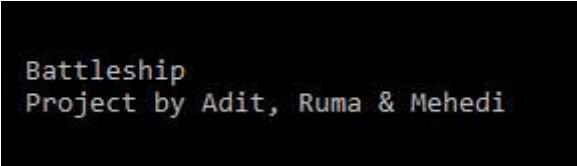#include <strings.h>

#include <time.h>
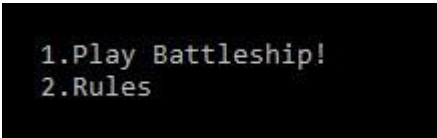
#include <stdlib.h>

#include <conio.h>

## User steps while running the game:

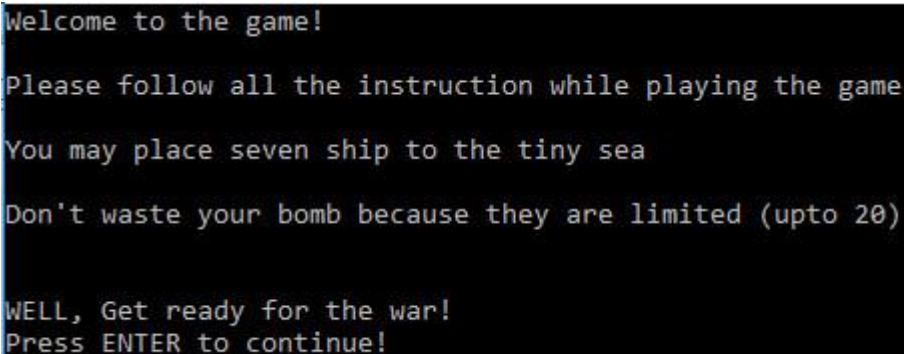The game work with a few steps. After running the game, it starts with its name and project handler with slow motion by using delay function.



After that it comes with two option. First one is direct play mode and second one is Rules and regulation.



We can choose option 1 or 2 to continue. It is important to know the rules of a game to play easily. Let, we choose option 2. Then the rules are displayed.

Rules are:

Then we can easily go back to the previous menu by pressing Enter.

Then if we choose option 1, it leads us to the player registration option.

```
Player-1 register your name: 1
Player-2 register your name: 2
```

To understand easily, let our players name is 1 and 2. After pressing enter we will see a short instruction.

```
2 this is your turn to place your Ship!

Please told 1 to go away from the screen. He may take a cup of TEA! :D
```

Now player 2 will place his/her ship. As this is a off line single console game, so player 1 is requested not to see the screen now. Then a grid will have generated and player 2 can place 7 ships. The grid is look like-

```
              0 1 2 3 4 5 6 7 8 9
           0  . . . . . . . . . .
           1  . . . . . . . . . .
           2  . . . . . . . . . .
           3  . . . . . . . . . .
           4  . . . . . . . . . .
           5  . . . . . . . . . .
           6  . . . . . . . . . .
           7  . . . . . . . . . .
           8  . . . . . . . . . .
           9  . . . . . . . . . .
Ship no. 1 :
Enter X & Y coordinate:
```

After placing all ship, player 1 will see a short notice and the battle will start. Player 1 will have 20 bomb to heat.

After heating all the ships or finishing all the bomb, player 2 will get chance to heat player 1 ship. If both of them heat the same number of ships with same number of bomb, then the match will be draw. Otherwise, who can heat more ship are declared as winner!

If the same players want to play again then they can press 1, otherwise press any key to exit.



**Appendix:**

As a whole, the project will be a good learning experience for us. We will be gained knowledge about the various aspects of C and C++. At the same time, we will be developed a deep understanding about the application developing interface.