

# **Lab06 Report**

**Lab06**  
**Section: 4**

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**Problem:** Create a program that creates a bop it type game requiring the user to press a button on a DS4 within a certain amount of time.

**Analysis:** Program reads ds4 inputs only for a certain time and uses them.

**Design:**

First code was created to randomly select one button for the user to press during the game. This was assigned to an int variable that changed the text output to console depending on what button it wanted. A loop was made to run the code that checks for the button input only during a certain amount of time. The time allotted was stored in a local variable that was adjusted with each correct input. The ending output was determined based on how the game ended. A different output was displayed whether the player pressed the wrong button or they ran out of time. The number of correct presses were tracked and displayed at the end.

**Testing:**

Code was tested after each major implementation

**Comments:**

Fun code

**Questions:**

1. Used the rand function to randomize buttons
2. If they ran out of time and if they pushed the wrong button
3. Had an if statement that made sure that no buttons were being pressed before the code could run

**Source code:**

```

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

/*-----
-                                     Prototypes
-----*/

/*-----
-                                     Notes
-----*/

// Compile with gcc lab06.c -o lab06
// Run with ./ds4rd.exe -d 054c:05c4 -D DS4_BT -t -b | ./lab06

/*-----
-                                     Implementation
-----*/

int main(int argc, char *argv[])
{
    srand(time(NULL)); /* This will ensure a random game each time. */
    int time, triangle, circle, cross, square, q, w, e, r;
    int numCorrect = 0;
    int gameEnder = 0;
    printf("Welcome to bop it type game\n");
    printf("Push any button to start\n");
    while(1){
        scanf(" %d , %d, %d, %d, %d, %d, %d, %d, %d" , &time, &triangle, &circle, &cross, &square, &q, &w, &e, &r);
        if (triangle == 1 || circle == 1|| square == 1|| cross == 1){

            int timeToDo = 5000;
            while (1){
                scanf(" %d , %d, %d, %d, %d, %d, %d, %d, %d" , &time, &triangle, &circle, &cross, &square, &q, &w, &e, &r);
                if (triangle + square + circle + cross == 0){
                    int prevtime = time;
                    int maxTime = prevtime + timeToDo;
                    int randButton = (rand()%4) + 1;
                    if (randButton == 1){
                        printf("Press the trangle button\n");
                    }else if (randButton == 2){
                        printf("Press the circle button\n");
                    }else if (randButton == 3){
                        printf("Press the square button\n");
                    }
                }
            }
        }
    }
}

```

```

        printf("Press the circle button\n");
    }else if (randButton == 3){
        printf("Press the square button\n");
    }else{
        printf("Press the cross button\n");
    }
    printf("You have %d miliseconds to answer\n" , timeToDo);
    while(time < maxTime){
        scanf(" %d , %d, %d, %d, %d, %d, %d, %d, %d" , &time, &triangle, &circle, &cross, &square, &q, &w, &e, &r);
        if (randButton == 1){
            if (triangle == 1){
                numCorrect++;
                gameEnd = 1;
                timeToDo -= 100;
                break;
            }else if (square == 1 || circle == 1 || cross == 1){
                printf("You pressed the wrong button :(\n");
                gameEnd = 3;
                break;
            }
        }
        }else if (randButton == 2){
            if (circle == 1){
                numCorrect++;
                gameEnd = 1;
                timeToDo -= 100;
                break;
            }else if (square == 1 || triangle == 1 || cross == 1){
                printf("You pressed the wrong button :(\n");
                gameEnd = 3;
                break;
            }
        }
        }else if (randButton == 3){
            if (square == 1){
                numCorrect++;
                gameEnd = 1;
                timeToDo -= 100;
                break;
            }else if (triangle == 1 || circle == 1 || cross == 1){
                printf("You pressed the wrong button :(\n");
                gameEnd = 3;
                break;
            }
        }
        }else{
            if (cross == 1){
                numCorrect++;
                gameEnd = 1;
                timeToDo -= 100;
                break;
            }
        }
    }
}

```

```

        numCorrect++;
        gameEnd = 1;
        timeToDo -= 100;
        break;
    }else if (square == 1 || circle == 1 || triangle == 1){
        printf("You pressed the wrong button :(\n");
        gameEnd = 3;
        break;
    }
}
}

if (gameEnd == 0){
    printf("You ran out of time :(\n");
    printf("You got %d correct\n", numCorrect);
    gameEnd = 2;
    break;
}else if (gameEnd == 3){
    printf("You got %d correct\n", numCorrect);
    gameEnd = 2;
    break;
}else{
    gameEnd = 0;
}
}

}

if (gameEnd == 2){
    break;
}
}
}
return 0;
}

/* Put your functions here, and be sure to put prototypes above. */

```

## Output screenshot:

```

$ ./ds4rd-2.exe -d 054c:09cc -D DS4_USB -t -bt | ./lab06
Welcome to bop it type game
Push any button to start
Press the triangle button
You have 5000 milliseconds to answer
Press the square button
You have 4900 milliseconds to answer
Press the triangle button
You have 4800 milliseconds to answer
Press the circle button
You have 4700 milliseconds to answer
Press the triangle button
You have 4600 milliseconds to answer
You ran out of time :(
You got 4 correct

```