

# The Game

Project Phase III

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ITE 450: Human-Computer Interaction

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## 1. The Game

### 1.1 Main Menu

The main menu allows the player to select which game they want to play. From this screen, they can select '1' to play High Roll vs Low Roll or '2' to play Sudoku.

```
*****
Welcome to The Game!

Main Menu
-----
Enter the number that corresponds to the game you want to play.
1 - High Roll vs Low Roll
2 - Sudoku

```

If they choose any other option, an error message will be displayed.

```
*****
Welcome to The Game!

Main Menu
-----
Enter the number that corresponds to the game you want to play.
1 - High Roll vs Low Roll
2 - Sudoku
3
You have made an invalid selection. Try again.

```

## 2. High Roll vs Low Roll Game

### 2.1 Main Menu

If the player selects option '1', they will be taken to the main menu for High Roll vs Low Roll. From here they have 4 options they can select.



## 2.3 Play the Game

Option 2 from the menu will allow the player to play the game. First, they will select 'high' or 'low.'

```
-----  
Let's Play!  
-----  
  
Do you think I will roll a high or low number?  
(Enter 'h' for high or 'l' for low.)
```

Then, the player will enter a number.

```
-----  
Let's Play!  
-----  
  
Do you think I will roll a high or low number?  
(Enter 'h' for high or 'l' for low.)  
h  
  
Ha ha ha... you think I am going to roll a high number.  
Enter your number (1-6):
```

They will be prompted to enter 'r' to roll the die.

```
-----  
Let's Play!  
-----  
  
Do you think I will roll a high or low number?  
(Enter 'h' for high or 'l' for low.)  
h  
  
Ha ha ha... you think I am going to roll a high number.  
Enter your number (1-6): 4  
  
Are you ready to roll?  
(Enter 'r' to roll.)
```

After that, the results are displayed.

The first image below is an example of the winning response. Next is the screen if they player lost.

```

*****
You guessed I would roll a high number.

The number you guessed was 4
and I rolled a ...

6

*****
**You win!!**
*****

Do you want to play again?
(Enter 'y' for yes or 'n' for no.)

```

```

*****
You guessed I would roll a low number.

The number you guessed was 2
and I rolled a ...

2

I won. Sorry about your luck.

Do you want to play again?
(Enter 'y' for yes or 'n' for no.)

```

From either results screen, the player can enter 'y' to play again which will take them back to the 'Let's Play' screen where they can enter a high or low guess. If the player selects 'n', a short message will display and they can press any key to be taken back to the High Roll vs Low Roll menu.

```

*****
You guessed I would roll a high number.

The number you guessed was 5
and I rolled a ...

4

I won. Sorry about your luck.

Do you want to play again?
(Enter 'y' for yes or 'n' for no.)
n
That was fun! Thanks for playing.
Press any key to continue . . .

```

At any point during the game, if the player makes an invalid selection an error will be displayed. If they have an error guessing high or low or an error picking a number, they will be prompted to try again.

```
-----  
Let's Play!  
-----  
  
Do you think I will roll a high or low number?  
(Enter 'h' for high or 'l' for low.)  
d  
You have made an invalid selection. Try again.
```

```
-----  
Let's Play!  
-----  
  
Do you think I will roll a high or low number?  
(Enter 'h' for high or 'l' for low.)  
h  
  
Ha ha ha... you think I am going to roll a high number.  
Enter your number (1-6): 9  
You have made an invalid selection. Try again.
```

If they make a mistake when it's time to roll the die, the computer assumes they do not want to roll, displays a brief message, and directs them back to the menu.

```
-----  
Let's Play!  
-----  
  
Do you think I will roll a high or low number?  
(Enter 'h' for high or 'l' for low.)  
l  
  
Ha ha ha... you think I am going to roll a low number.  
Enter your number (1-6): 3  
  
Are you ready to roll?  
(Enter 'r' to roll.)  
s  
I guess you got scared that I would win. Later!
```

## 2.4 High Scores

By selecting option '3' from the menu, the player will be taken to the 'High Scores' screen. Here they will see the top 3 players and their score. They can press any key to return to the menu.

```

High Scores
-----
First place: Luanne - 3 points
Second place: Bobby - 2 points
Third place: Dale - 1 points
Press any key to continue . . .

```

If the player earns a high score, they will be prompted to enter their name before exiting the game.

```
*****
You guessed I would roll a high number.

The number you guessed was 1
and I rolled a ...

5

*****
**You win!!**
*****

Do you want to play again?
(Enter 'y' for yes or 'n' for no.)
n
You have a new high score!
Enter your name:
```

If they go back to view the high scores, they will see where they placed.

## 2.5 Exit

Option '4' from the menu will allow the player to exit the High Roll vs Low Roll game. Nothing displays.

They will be taken back to the main menu.



### 3. Sudoku Game

### 3.1 Main Menu

If the play selects option '1', they will be taken to the main menu for Sudoku. From here they have 4 options they can select.

```
--*-*-*--*-*-*--*-*-*--*-*-*--*-*-*--*-*-*--*-*-*--*-*-*--*-*-*--*--  
                                Sudoku  
                              Main Menu  
--*-*-*--*-*-*--*-*-*--*-*-*--*-*-*--*-*-*--*-*-*--*-*-*--*-*-*--*--  
  
Select an option:  
  
1 - How to play  
2 - Play the game  
3 - High Scores  
4 - Exit
```

If any other option is selected, an error message will be displayed.

```
--*-*-*-*-*-*-*-*-*-*-*-*-*-*-*-*-*--  
                                Sudoku  
                               Main Menu  
--*-*-*-*-*-*-*-*-*-*-*-*-*-*-*-*--  
  
Select an option:  
  
1 - How to play  
2 - Play the game  
3 - High Scores  
4 - Exit  
6  
You have made an invalid selection. Try again.
```

### 3.2 How to Play

Selecting option '1' from the menu will take the player to the instructions. The only option here is to read and press any key to return to the menu.

```

-----
                        How to play Sudoku
-----

The object of the game is to place the digits 1-4 in each row and column of the board.
You can not repeat a digit in any row across or column down.

At the beginning of each game, some spots will be filled in to help you.
Once you have completed the board, the computer will check your results to see if you are correct.

Press any key to continue . . .

```

### 3.3 Play the Game

Option '2' will allow the player to play the game. A sample game board is displayed to show the name of each position on the board. The players game board is also displayed. First, they will be asked to select a location they would like to add a number.

```

-----
                        Let's Play!
-----

Here is a sample board to help you identify the locations.
Refer to this when you want to add a number to your game board.
A B C D
E F G H
I J K L
M N O P

Here is your game board:
0 3 2 0
2 0 0 3
1 0 3 0
0 4 0 2

Where would you like to place a number?
(Enter the uppercase letter from the sample board that matches the spot you want to update.)

```

Then they will be asked which number they want to place in that position.

```

-----
                        Let's Play!
-----

Here is a sample board to help you identify the locations.
Refer to this when you want to add a number to your game board.
A B C D
E F G H
I J K L
M N O P

Here is your game board:
0 3 2 0
2 0 0 3
1 0 3 0
0 4 0 2

Where would you like to place a number?
(Enter the uppercase letter from the sample board that matches the spot you want to update.)
A

Which number do you want to put there?

```

The players board is updated with their selection. They are then asked if they would like to enter another value. If they select 'yes', they will be prompted for another location and value.

```
Sample board:
A B C D
E F G H
I J K L
M N O P

Your game board:
4 3 2 0
2 0 0 3
1 0 3 0
0 4 0 2

Your value has been updated.

Would you like to enter another number?(Enter 'y' for yes or 'n' for no.)
```

```
Here is a sample board to help you identify the locations.
Refer to this when you want to add a number to your game board.
A B C D
E F G H
I J K L
M N O P

Here is your game board:
4 3 2 0
2 0 0 3
1 0 3 0
0 4 0 2

Where would you like to place a number?
(Enter the uppercase letter from the sample board that matches the spot you want to update.)
```

If the player selects 'no', they will be asked if they want to quit the game or check their answers.

```
Sample board:
A B C D
E F G H
I J K L
M N O P

Your game board:
4 3 2 1
2 0 0 3
1 0 3 0
0 4 0 2

Your value has been updated.

Would you like to enter another number?(Enter 'y' for yes or 'n' for no.)
n
Please enter 'Q' to quit the game.
or 'C' to check your answer.
```

If they select to quit, a brief message will display and they can press any key to return to the menu.

```
Sample board:
A B C D
E F G H
I J K L
M N O P

Your game board:
4 3 2 1
2 0 0 3
1 0 3 0
0 4 0 2

Your value has been updated.

Would you like to enter another number?(Enter 'y' for yes or 'n' for no.)
n
Please enter 'Q' to quit the game.
or 'C' to check your answer.
Q
Thanks for playing.
Press any key to continue . . .
```

If the player chooses to check their answer, the results screen is displayed.

```
The correct answer is:
4 2 1 3
1 3 4 2
3 4 2 1
2 1 3 4

Your answer was:
4 2 1 3
1 3 4 2
3 4 2 1
2 1 3 4

*****
*** You Win!! ***
*****

You have a new fastest time.
Enter your name:
```

If the player wins, and has a fastest time, they will be prompted to enter their name. Once their name is entered, or if the won without getting a fastest time record, they will be asked if they want to play again.

```
The correct answer is:
4 2 1 3
1 3 4 2
3 4 2 1
2 1 3 4

Your answer was:
4 2 1 3
1 3 4 2
3 4 2 1
2 1 3 4

*****
*** You Win!! ***
*****

You have a new fastest time.
Enter your name: Sue

Would you like to play again?
(Enter 'y' for yes or 'n' for no.)
```

By selecting 'yes', they will be taken back to the 'Let's Play' screen to begin a new game.

If they select 'no', a short message will appear and they can press any key to be taken back to the menu.

```
The correct answer is:
4 3 2 1
2 1 4 3
1 4 3 2
3 2 1 4

Your answer was:
4 3 2 1
2 1 4 3
1 4 3 2
3 2 1 4

*****
*** You Win!! ***
*****

You have a new fastest time.
Enter your name: Ann

Would you like to play again?
(Enter 'y' for yes or 'n' for no.)
n

Thanks for playing.
Press any key to continue . . .
```

At any point during the game, if the player makes an invalid selection an error will be displayed. The player must select a position and value before a positional error will be displayed. If an invalid position was chosen, they will get this error and can press any key to be taken back to enter a new position.

```
You have made an invalid selection.  
Please make sure you are entering an uppercase A-P  
Press any key to continue . . .
```

If an incorrect value is selected, they will get this error and prompted to enter a new value.

```
Here is a sample board to help you identify the locations.  
Refer to this when you want to add a number to your game board.  
A B C D  
E F G H  
I J K L  
M N O P  
  
Here is your game board:  
0 2 0 1  
1 4 2 0  
0 0 1 2  
0 1 0 0  
  
Where would you like to place a number?  
(Enter the uppercase letter from the sample board that matches the spot you want to update.)  
A  
  
Which number do you want to put there? 6  
You have made an invalid selection.  
Please enter a number 1-4
```

Once the position has been updated, the player will be asked if they want to enter another number. By choosing anything other than 'yes', they will be asked if they want to quit the game or check their answer.

```
Sample board:  
A B C D  
E F G H  
I J K L  
M N O P  
  
Your game board:  
4 1 0 3  
2 3 0 0  
1 0 3 0  
3 0 1 0  
  
Your value has been updated.  
  
Would you like to enter another number?(Enter 'y' for yes or 'n' for no.)  
h  
Please enter 'Q' to quit the game.  
or 'C' to check your answer.
```

If they select anything other than quit or check, a short message will be displayed and they can press any key to be taken back to the menu.

```
Sample board:
A B C D
E F G H
I J K L
M N O P

Your game board:
4 1 0 3
2 3 0 0
1 0 3 0
3 0 1 0

Your value has been updated.

Would you like to enter another number?(Enter 'y' for yes or 'n' for no.)
h
Please enter 'Q' to quit the game.
or 'C' to check your answer.
d
Thanks for playing.
Press any key to continue . . .
```

### 3.4 High Score

By selecting option '3' from the menu, the player will be taken to the 'High Scores' screen. Here they will see the top 3 players and their score. They can press any key to return to the menu.

[illegible]

### 3.5 Exit

Option '4' from the menu will allow the player to exit the Sudoku game. Nothing displays. They will be taken back to the main menu.

## 4. References

[1] <https://www.sudokuweb.org/> (accessed October 21, 2020).