The Game

Project Phase V

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ITE 450: Human-Computer Interaction

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1 Data Summarization

1.1 Personal Information

1.1.1 What is your first name?

The first question on the survey asked the participants to enter their name. Six different responses were received for this question.

1.1.2 What is your age range?

The second question asked the participants to enter their age. Responses were received in four different age categories. Note, the one 16.7% in the 21-30 age group should be in the 5-10 age group.
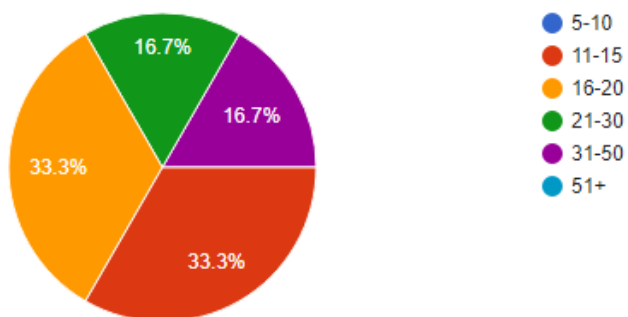
1.1.3 If you are a student, what grade are you in?

Four of the six participants responded that they were currently attending school. Each of them in a different grade although they may have fallen in the same category.
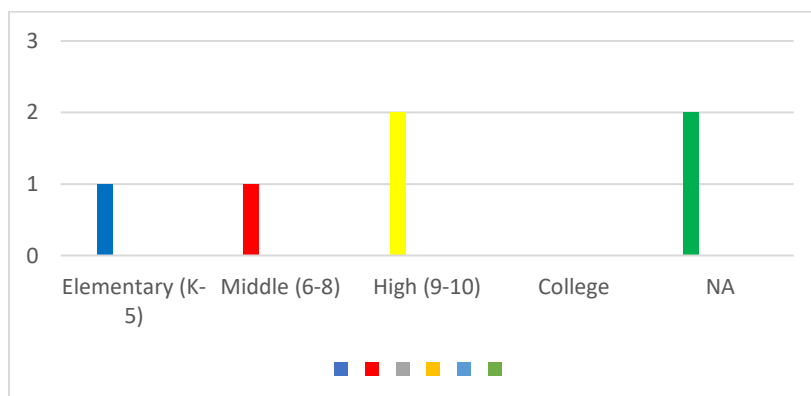
1.1.4 Are you comfortable using a computer?

Half of the participants stated they were very comfortable using a computer. 33% said they were somewhat comfortable and 16% said they do not like computers.
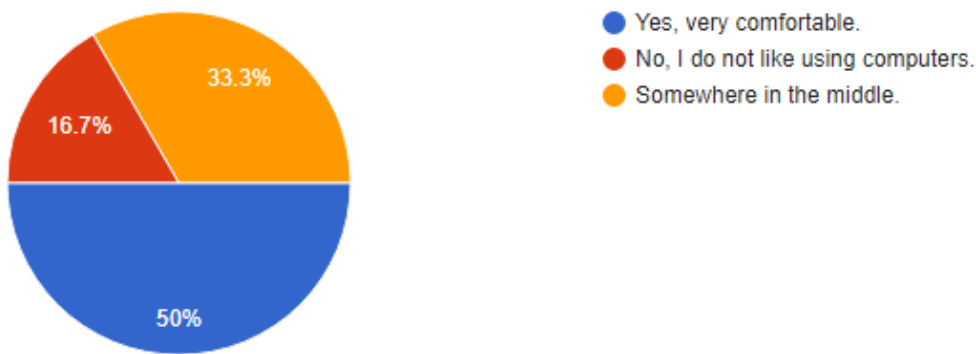
1.1.5 Do you have any computer programming experience?

66.7% of the participants reported they have no computer programming experience. 33.3% reported they did. During a post-interview with the participants it was determined those who answered yes misunderstood the question and they do not have any programming experience. The graph based on the survey answers is on the left while a depiction of what the graph should look like is on the right.

1.1 High Roll vs Low Roll

1.1.1 Have you played a game like this before?

Out of the six participants in the survey, only 33.3% of them had played a game like High Roll vs Low Roll in the past. That means this game was a new experience to the majority of those participating in the survey.
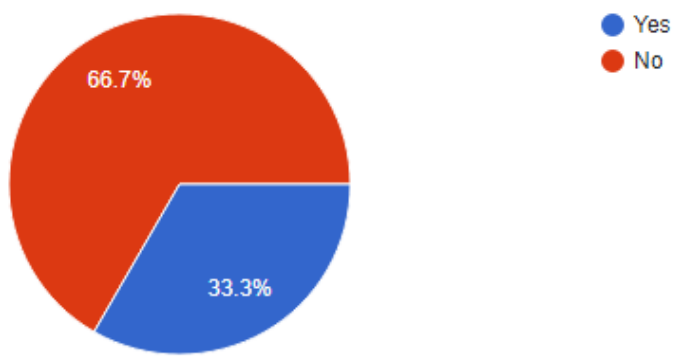
1.1.2 Did you have to spend a lot of time figuring out how to play this game?

Only 33.3% of the participants reported they spent a lot of time trying to figure out how to play the game. Both players had never played a game like this before.
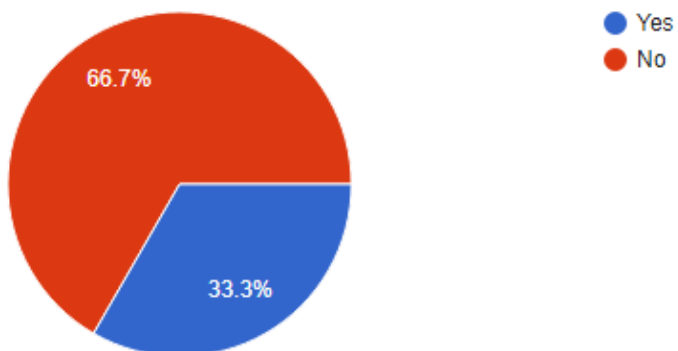
1.1.3   Were the on-screen instructions easy to follow?

All the participants said the on-screen instructions were easy to follow and guided them through what

to do next.
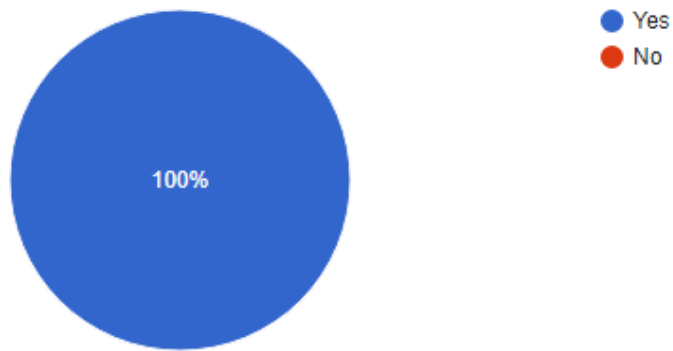
1.1.4   Was anything about this game difficult for you?

Only one participant reporting having trouble with the game. The problem they experienced did not

have anything to do with the functionality of the game. The user wanted to be able to touch the screen

to play the game instead of using the keyboard.
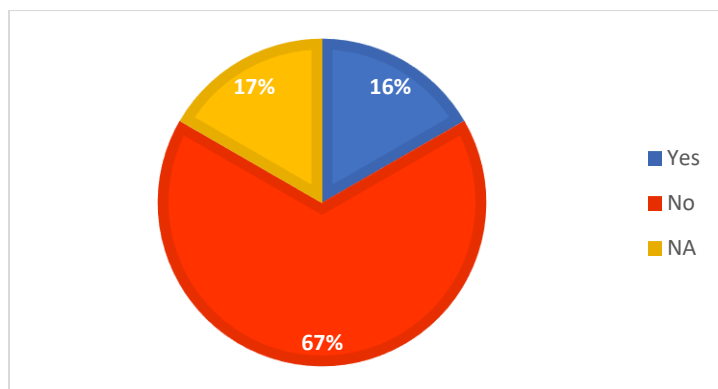
1.1.5   What did you like about this game?

All six participants liked something different about the game. Their likes were not similar enough to group into categories, so their responses are shown on the chart below.
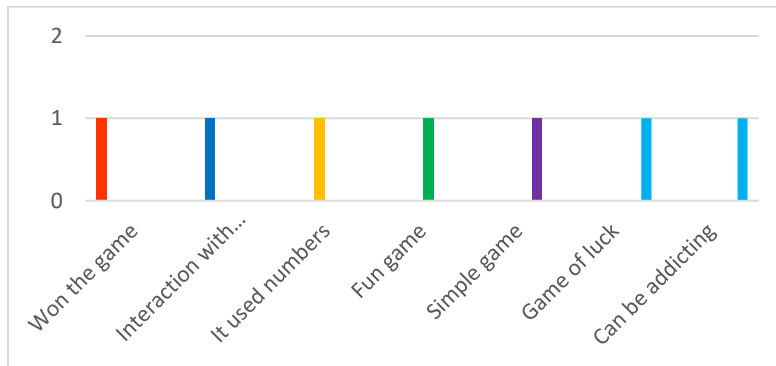
1.1.6   Was there anything you would change?

83% of the participants suggested a change. Only one person said they would not change anything. The suggestions are listed on the graph below.
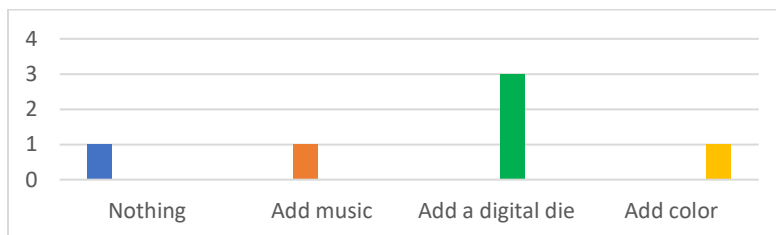
1.1.7   Please provide any additional feedback you have about this game.

There were four different responses to this question. 66% of the participants had the same two responses while the remaining 33% had a unique response.
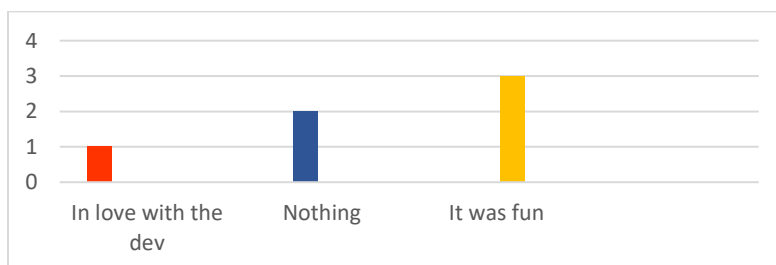
1.2 Sudoku

1.2.1 Have you ever played a game like this before?

Only 33.3% of the participants said they have played Sudoku in the past. This means most of the players are experiencing this game for the first time.
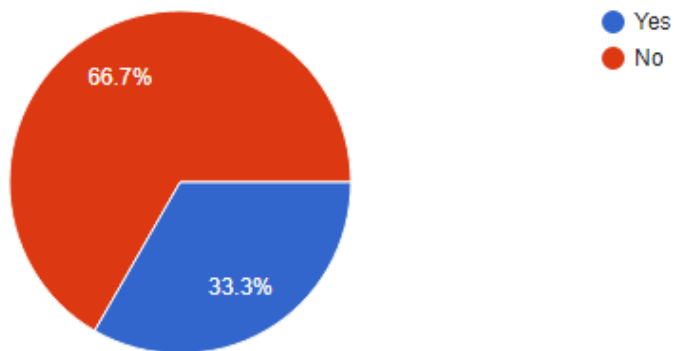
1.2.2 Did you have to spend a lot of time figuring out how to play this game?

Even though this was a new game to most participants, only 16.7% of them report having to spend a lot of time figuring out how to play the game.
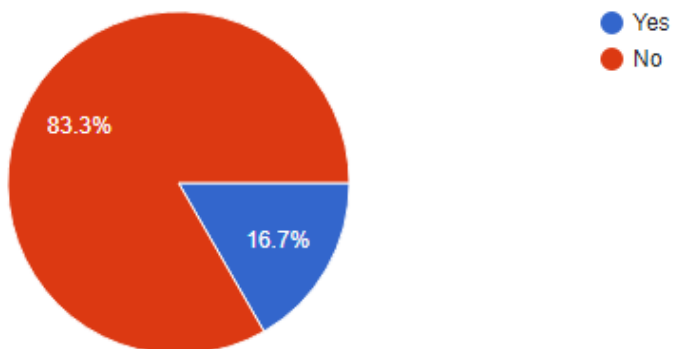
1.2.3 Were the on-screen instructions easy to follow?

Only one person, or 16.7% of the participants, said the on-screen instructions were difficult to follow. However, this is not the same person who said it took them a long time to figure out how to play the game.
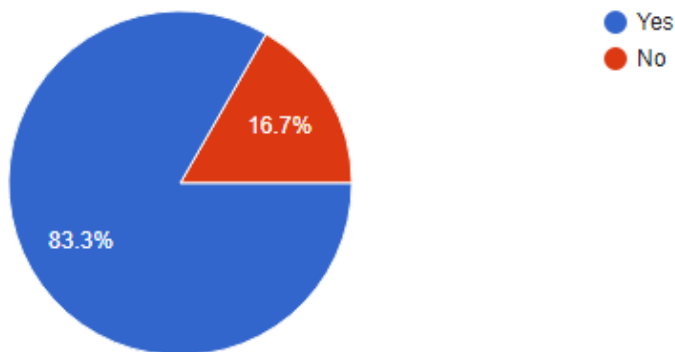
1.2.4 Was anything about this game difficult for you? If so, what was it?

50% of the participants did not have any difficulty to report. The other 50% reported the same issue and one participant reported multiple issues. The chart below details the responses.
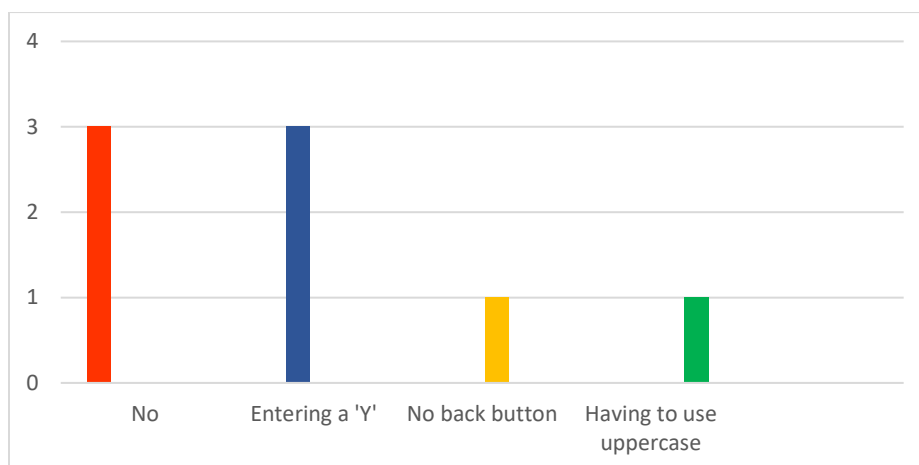
1.2.5 What did you like about this game?

There was a total of three different responses to this question with half of the participants liking the same feature of the game.
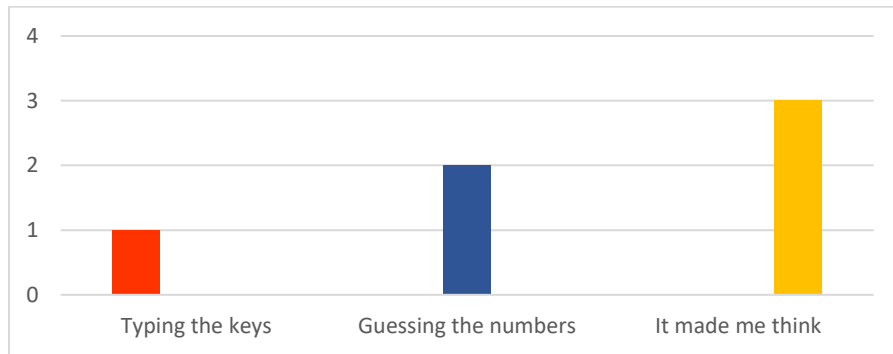
1.2.6 Was there anything you would change?

There were more answers to this question than there were participants. Meaning some people had more than one suggestion. However, some of the ideas were mentioned previously and some of the responses were similar enough to be considered the same.
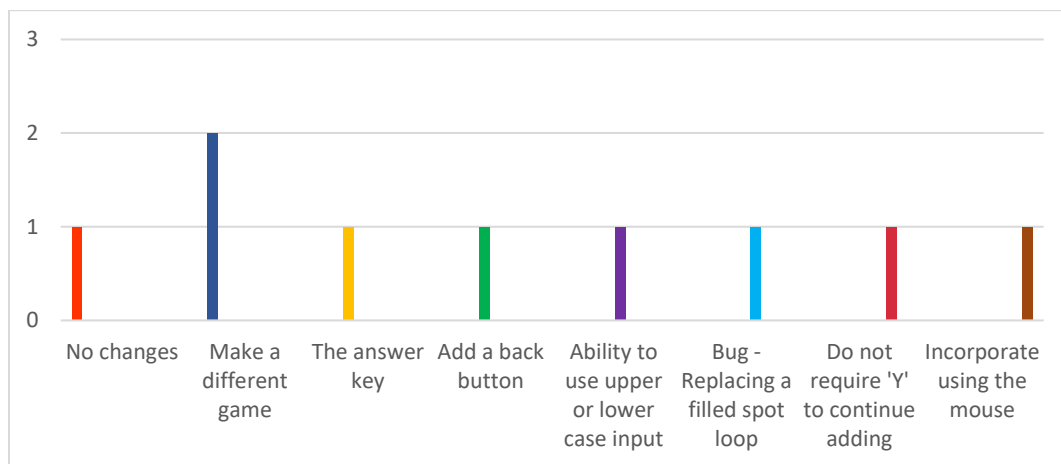
1.2.7   Please provide any additional feedback you have about this game.

Feedback for this game was just as varied as the suggested changes. Some things had been previously mentioned but some had not.
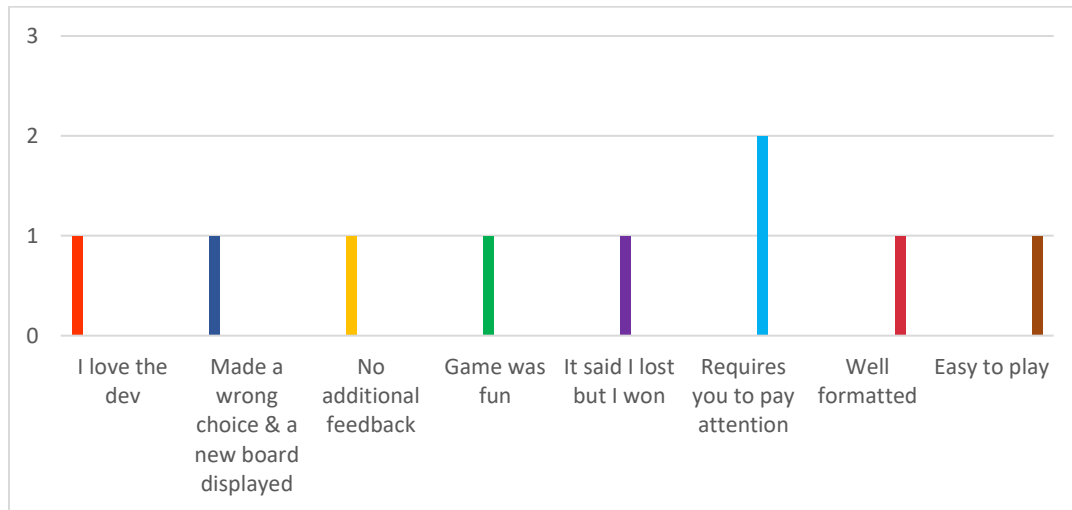
1.3 In Conclusion

1.3.1   How would you rate your overall satisfaction with the High Roll vs Low Roll game?

The rating scale was from 1-5. With 1 being lowest and 5 being highest satisfaction. 66.7% of the participants rated this game at a 5.
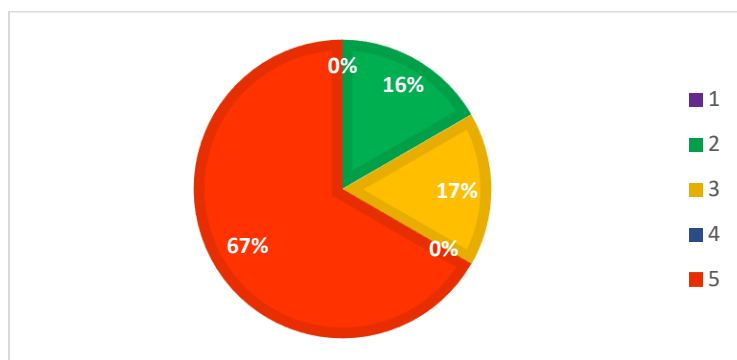
1.3.2 Why did you give it this rating?

33.3% of the players thought this game was fun. Another 33.3% thought it was boring. The final 33.3% had other reasons for the rating they chose.

1.3.3 How would you rate your overall satisfaction with Sudoku?

Sudoku had better ratings. 66.7% gave this game a 4 and 33.3% gave it a 5.
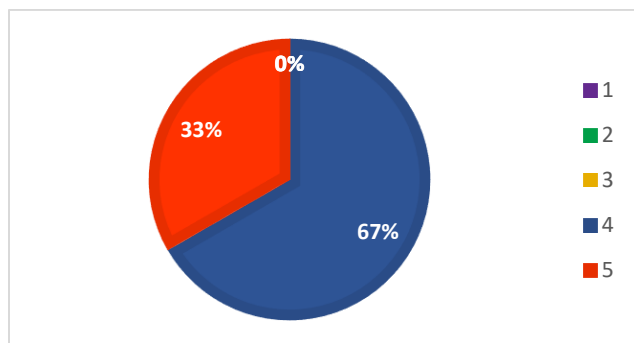
1.3.4 Why did you give it this rating?

50% of the participants had a similar answer to why they gave the rating they did. The other half had various reasons.
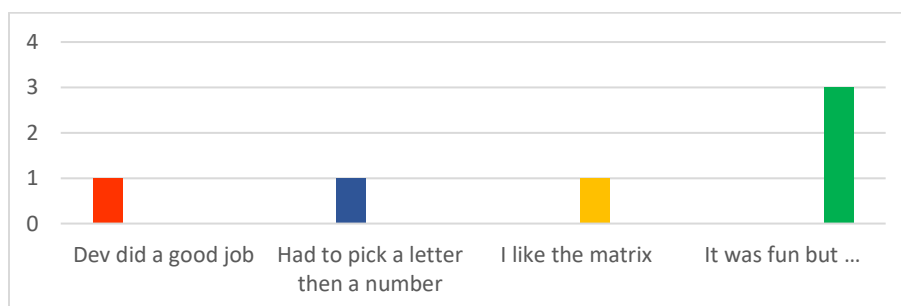
1.3.5 Would you play either of these games on your own device?

All the participants would play at least one of the games on their own device if given the opportunity.

50% said they would only play Sudoku. 33.3% said they would only play High Roll vs Low Rolls. 16.7% said they would play both games.
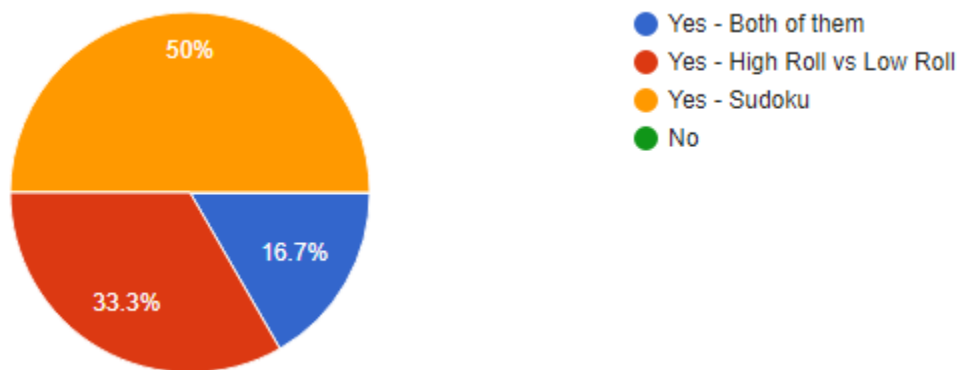
1.3.6 If you would not play either game on your own device, why?

This question was only to be answered if the participant would play neither of these games on their own device. However, the question was confusing and half of them skipped this question. Of the remaining three participants, two answered the same and one answered based on the one game they would not play.
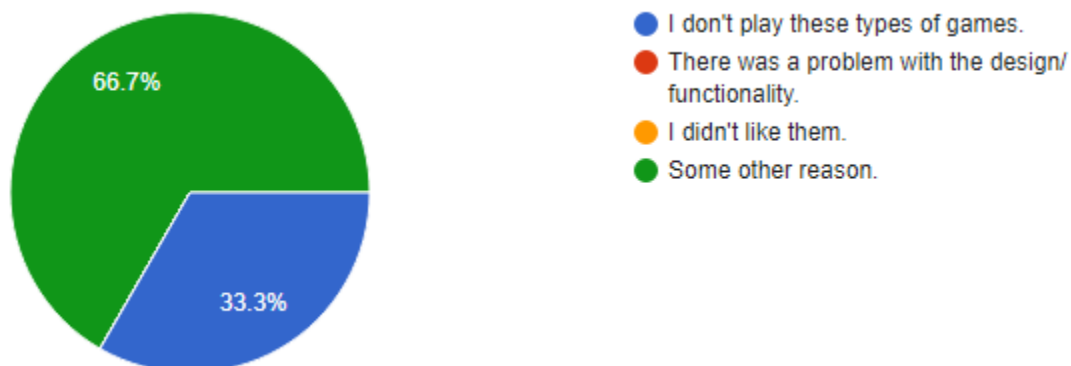
1.3.7 Is there anything else you would like to say about your experience playing either of these games, or do you have any other suggestions?

Many participants either skipped this question or said they had nothing else to say. 33.3% had final comments.
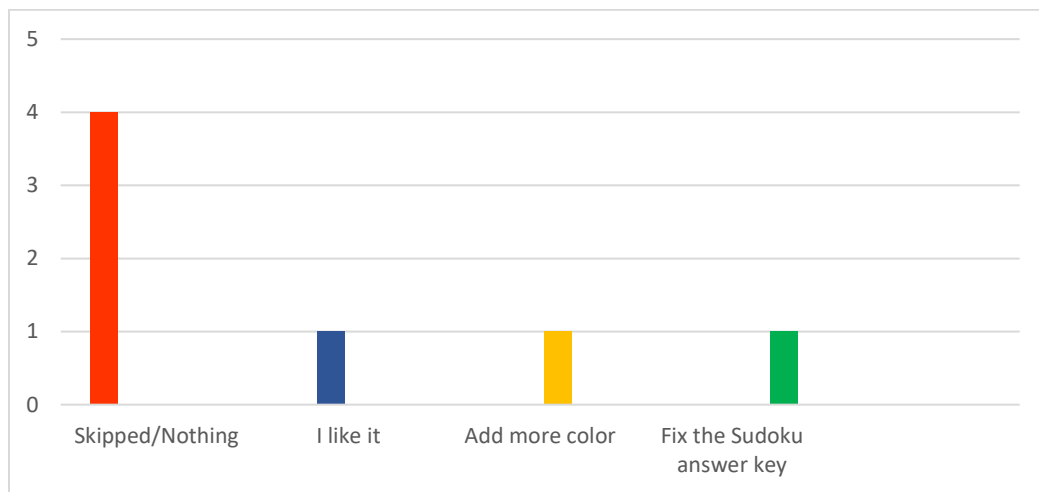
2 Reflections

2.1 User Initiated Changes and Implementation

Each participant was given multiple opportunities throughout the questionnaire to provide feedback related to changes they would like to see in the games. They provided many great suggestions when it came to wanted and/or needed changes. The changes can be grouped into three categories: Nice to have, should have, and must have.

The 'nice to have' items are just that, nice to have. They would make the game more appealing but do not change the functionality of the game, therefore the release of the game would not be delayed adding these modifications. These items would be added if there was enough to do so before releasing the game. Otherwise, they could be added to future releases. This would be adding music, adding other colors, and adding a digital dice on the High Roll vs Low Roll game.

The 'should have' items are things that should have been included when the game was designed. The addition of these items would make the game easier for the player. If time could not be scheduled to add these items prior to releasing the game, they would be added in the first update. These items all pertain to the Sudoku game. Add a back button to return to the previous screen, allow the user to enter upper or lowercase letters, do not hard code the answer key so alternate correct answers would still show as a correct answer, and remove the requirement to enter a 'Y' to add another number to the gameboard.

The 'must have' category is for bugs found and reported. These must be corrected before the game can be released. Two bugs were reported, and both were in the Sudoku game. The first one happened when a player was trying to enter a new number on the board in a position that already had a value. The game gives a message stating that spot already has a value and asks the player if they are sure they want to update that spot. If the player says yes, they should be allowed to enter a new value for the position. However, the participant reported once they said 'yes' nothing happened. The screen stayed at the same spot and they were stuck in the game. The second bug occurred when a participant entered the letter 'N' when it was not an option on that screen. Instead of the game responding with the invalid response message it took the participant back to the beginning of the game and reset their game board.

One thing that was mentioned by a few participants was wanting to be able to use a mouse to click on the games instead of having to use the keyboard. However, that functionality is not supported by a console app so for that to happen, the games would have to be created with an entirely different program.

2.2 Developer Updates and Implementation

Over the course of programming and testing the games, observations were made that could enhance or improve the games that were not implemented prior to sending the games to be reviewed by the

participants. Some of these items were caught and reported by the participants. Only those not previously brought up by the participants is discussed here. These items can also be placed in the same three categories of nice to have, should have, and must have.

There are two additional 'nice to have' items that would be added as time permits. The first one is to randomize the message at the end of High Roll vs Low Roll. Currently, the message says, "That was fun. Thanks for playing." Having different endings that are randomized would add to the interaction with the game which several players reported as something they currently like about the game. The other change is in Sudoku. Instead of showing 0's for spots that do not have a value entered, the board would be updated to display [ ], ( ), or __ to indicate a blank field.

There are a few 'should have' items that would be added before the games are released if time permits, else they would be added to the first update after the initial release. The first couple pertains to both games. From each game menu the player can select option 4 to exit the game. Currently this takes them back to the main menu where they can select which game to play. The change would be to add a pop-up message confirming their choice. Something along the lines of, "You have selected to exit (name of game)." The next would be adding the option to press 'Q' to quit either game from any screen. The remaining changes apply to Sudoku only. One would be a change of wording. Right now, after a number is entered in a blank spot the verbiage says, "Do you want to add another," This would be changed to say, "What position do you want to add next?" as long as there is an empty spot on the board. This would go along with the users request to not have to enter 'Y' each time they want to add another value to the board. At this same spot in the game, add a system check to see if the game board is full. If so, instead of asking what position they want to add, the system would say, "Your board is complete. Are you ready to check the results?" The final update would be to help the player visualize the Sudoku gameboard more clearly. Presently, the game board shows 4 numbers across and 4 numbers down

making a 4x4 block of numbers. The example below shows the enhancements that would break the

gameboard into four large areas.

```
Current          _Update_
1 2 3 4          |1 2 | 3 4|
4 3 2 1          |4 3 | 2 1|
2 4 1 3          |2 4 | 1 3|
3 1 4 2          |3 1 | 4 2|
```

Finally, there are two 'must have' items that would be updated prior to the initial release of the game.

Both have to do with the high scores but there is an update for each game. In High Roll vs Low Roll, the

name entered for high score can only be one name. If you enter a space to type a second word/name,

the screen flashes and you cannot do anything. You become stuck. This would be corrected. In Sudoku,

at the end of the game if you have a high score the message appears saying, "You have a high score.

Please enter your name." After you enter your name it asks if you want to play again but you are not

given the opportunity to make a choice. The system automatically goes right to "thanks for playing" and

takins you back to the game menu as if you had selected no. This would be corrected.

3   Re-evaluation

Once the changes have been made to the interface, the questionnaire would be updated. Some of the

updates would be to incorporate the new features and others would be to better clarify questions that

were misunderstood by the original participants.

To begin with, all questions would be marked as required. For the questions that do not pertain to all

participants, such as, "If you are a student, what grade are you in?", an additional answer that says 'does

not apply to me' would be added.

In the personal questions section, the question, "Do you have any computer programming experience?"

would be changed to, "Have you ever created a computer program?". For High Roll vs Low Roll, a

question would be included asking about the die that was added.

Under both High Roll vs Low Roll and Sudoku, the following questions would be modified:

- "Did you have to spend a lot of time figuring out how to play this game?" would be followed up with, "How long did it take and how did you figure out how to play?" This could help narrow down what the exact problem is and how longer players consider to be a long time.

- "Were the on-screen instructions easy to follow?" would have a follow-up question if the participant answers 'no'. The follow-up question would ask, "What could be done to make the instructions easier to follow?"

- After asking about the on-screen instructions, new questions would be inserted asking if the participant was able to hear the sound effects/music while playing the game and were the colors easy on the eyes and appealing?

- A new question would also be added between, "What did you like about this game?" and "Was there anything you would change?" The new question would ask, "Was there anything about the functionality of the game that needs to be changed?" The original idea behind the what would you change question was to find out if there was anything wrong with the functionality, but many participants responded with enhancements to the game. By adding the new question, the participant would be guided to think about how the game performed and then the next question would allow them to share enhancement ideas.

- Before the final question, a new question would be inserted asking if the participants were able to visit each menu option and if that option functioned as it should.

In the conclusion section of the questionnaire, the question, "If you would not play either game on your device, why?" would be reworded. It would be changed to say, "If you would play neither game on your own device, why?" The participants were answering this explaining why they would only play one game and not both, or they skipped the question because they did not understand what was being asked.

What the question was trying to find out is why they would not play either game, meaning they would not play High Roll vs Low Roll or Sudoku on their own device. Rephrasing the question should provide more clarity as to what is being asked.

The Game Questionnaire

Pilot survey for reviewing a game prototype.

What is your first name?

hector

What is your age range?

5-10
11-15
16-20
21-30
31-50
51+

If you are a student, what grade are you in?

Are you comfortable using a computer?

Yes, very comfortable.
No, I do not like using computers.
Somewhere in the middle.

Do you have any computer programming experience?

Yes
No

High Roll vs Low Roll

Play the game and then answer the following questions.

Have you played a game like this before?

Yes
No

Did you have to spend a lot of time figuring out how to play this game?

Yes
No

Were the on-screen instructions easy to follow?

Yes
No

Was anything about this game difficult for you? If so, what was it?

What did you like about this game?

i won

Was there anything you would change?

add music

Please provide any additional feedback you have about this game.

im in love with the lady who made the game

Sudoku
Play the game and then answer the following questions.

Have you played a game like this before?

Yes
No

Did you have to spend a lot of time figuring out how to play this game?

Yes
No

Were the on-screen instructions easy to follow?

Yes
No

Was anything about this game difficult for you? If so, what was it?

i hate sudoku

What did you like about this game?

typing keys

Was there anything you would change?

something besides sudoku

Please provide any additional feedback you have about this game.

even thought i hate sudoku, i love the sudoku lady

In Conclusion
After playing both games, please answer the following questions.

How would you rate your overall satisfaction with High Roll vs Low Roll?

Horrible

1
2
3
4
5

Great

Why did you give it this rating?

it was easy

How would you rate your overall satisfaction with Sudoku

Horrible

1
2
3
4
5

Great

Why did you give it this rating?

she did a good job making the game

Would you play either of these games on your own device?

Yes - Both of them
Yes - High Roll vs Low Roll
Yes - Sudoku
No

If you would not play either game on your own device, why?

I don't play these types of games.
There was a problem with the design/functionality.
I didn't like them.
Some other reason.

Is there anything else you would like to say about your experience playing these games, or do you have any other suggestions?

Questionnaire 2

The Game Questionnaire

Pilot survey for reviewing a game prototype.

What is your first name?

Brooklyn Camp

What is your age range?

5-10
11-15
16-20
21-30
31-50
51+

If you are a student, what grade are you in?

8th

Are you comfortable using a computer?

Yes, very comfortable.
No, I do not like using computers.
Somewhere in the middle.

Do you have any computer programming experience?

Yes
No

Play the game and then answer the following questions.

Have you played a game like this before?

Yes
No

Did you have to spend a lot of time figuring out how to play this game?

Yes
No

Were the on-screen instructions easy to follow?

Yes
No

Was anything about this game difficult for you? If so, what was it?

nothing was really difficult

What did you like about this game?

The ha ha ha

Was there anything you would change?

nope

Please provide any additional feedback you have about this game.

nothing

Sudoku

Play the game and then answer the following questions.

Have you played a game like this before?

Yes
No

Did you have to spend a lot of time figuring out how to play this game?

Yes
No

Were the on-screen instructions easy to follow?

Yes
No

Was anything about this game difficult for you? If so, what was it?

No, not really

What did you like about this game?

Is guessing the number

Was there anything you would change?

no

Please provide any additional feedback you have about this game.

I entered N by mistake. But when I hit check it made me go to a different board.

In Conclusion

After playing both games, please answer the following questions.

How would you rate your overall satisfaction with High Roll vs Low Roll?

Horrible

1
2
3
4

5

Great

Why did you give it this rating?

because its a good game to help on a problme

How would you rate your overall satisfaction with Sudoku

Horrible

1
2
3
4
5

Great

Why did you give it this rating?

first was that you have to pick a letter and then guess a number

Would you play either of these games on your own device?

Yes - Both of them
Yes - High Roll vs Low Roll
Yes - Sudoku
No

If you would not play either game on your own device, why?

I don't play these types of games.
There was a problem with the design/functionality.
I didn't like them.
Some other reason.

Is there anything else you would like to say about your experience playing these games, or do you have any other suggestions?

nope

The Game Questionnaire

Pilot survey for reviewing a game prototype.

What is your first name?

Mason

What is your age range?

5-10
11-15
16-20
21-30
31-50
51+

If you are a student, what grade are you in?

2th

Are you comfortable using a computer?

Yes, very comfortable.
No, I do not like using computers.
Somewhere in the middle.

Do you have any computer programming experience?

Yes
No

High Roll vs Low Roll
Play the game and then answer the following questions.

Have you played a game like this before?

Yes
No

Did you have to spend a lot of time figuring out how to play this game?

Yes
No

Were the on-screen instructions easy to follow?

Yes
No

Was anything about this game difficult for you? If so, what was it?

no

What did you like about this game?

it hase math

Was there anything you would change?

make it have a bord an a dise

Please provide any additional feedback you have about this game.

hoo ever that whut playing is fun

Sudoku

Play the game and then answer the following questions.

Have you played a game like this before?

Yes
No

Did you have to spend a lot of time figuring out how to play this game?

Yes
No

Were the on-screen instructions easy to follow?

Yes
No

Was anything about this game difficult for you? If so, what was it?

no

What did you like about this game?

numbers

Was there anything you would change?

make it not bee like the matrix

Please provide any additional feedback you have about this game.

no

In Conclusion

After playing both games, please answer the following questions.

How would you rate your overall satisfaction with High Roll vs Low Roll?

Horrible

1
2
3
4
5

Great

Why did you give it this rating?

becuse it was fun

How would you rate your overall satisfaction with Sudoku

Horrible

1
2
3
4
5

Great

Why did you give it this rating?

i like the matrix

Would you play either of these games on your own device?

Yes - Both of them
Yes - High Roll vs Low Roll
Yes - Sudoku
No

If you would not play either game on your own device, why?

I don't play these types of games.
There was a problem with the design/functionality.
I didn't like them.
Some other reason.

Is there anything else you would like to say about your experience playing these games, or do you have any other suggestions?

i like it

The Game Questionnaire

Pilot survey for reviewing a game prototype.

What is your first name?

braden

What is your age range?

5-10
11-15
16-20
21-30

If you are a student, what grade are you in?

9th

Are you comfortable using a computer?

Yes, very comfortable.
No, I do not like using computers.
Somewhere in the middle.

Do you have any computer programming experience?

Yes
No

High Roll vs Low Roll
Play the game and then answer the following questions.

Have you played a game like this before?

Yes
No

Did you have to spend a lot of time figuring out how to play this game?

Yes
No

Were the on-screen instructions easy to follow?

Yes
No

Was anything about this game difficult for you? If so, what was it?

not clicking

What did you like about this game?

it was fun

Was there anything you would change?

thw color

Please provide any additional feedback you have about this game.

it was fun to play i would recomend this to somone bored

Sudoku
Play the game and then answer the following questions.

Have you played a game like this before?

Yes
No

Did you have to spend a lot of time figuring out how to play this game?

Yes
No

Were the on-screen instructions easy to follow?

Yes
No

Was anything about this game difficult for you? If so, what was it?

putting in y

What did you like about this game?

made me think

Was there anything you would change?

the answer key

Please provide any additional feedback you have about this game.

it was overall fun but i was right and your code said i was wrong

In Conclusion

After playing both games, please answer the following questions.

How would you rate your overall satisfaction with High Roll vs Low Roll?

Horrible

1
2
3
4
5

Great

Why did you give it this rating?

it was not intesting enough

How would you rate your overall satisfaction with Sudoku

Horrible

1
2
3
4
5

Great

Why did you give it this rating?

it was fun but the code was wrong

Would you play either of these games on your own device?

Yes - Both of them
Yes - High Roll vs Low Roll
Yes - Sudoku
No

If you would not play either game on your own device, why?

I don't play these types of games.
There was a problem with the design/functionality.
I didn't like them.
Some other reason.

Is there anything else you would like to say about your experience playing these games, or do you have any other suggestions?

more color and fix sudoku

Questionnaire 5

The Game Questionnaire

Pilot survey for reviewing a game prototype.

What is your first name?

Daven

What is your age range?

5-10
11-15
16-20
21-30
31-50
51+

If you are a student, what grade are you in?

10

Are you comfortable using a computer?

Yes, very comfortable.
No, I do not like using computers.
Somewhere in the middle.

Do you have any computer programming experience?

Yes
No

High Roll vs Low Roll
Play the game and then answer the following questions.

Have you played a game like this before?

Yes
No

Did you have to spend a lot of time figuring out how to play this game?

Yes
No

Were the on-screen instructions easy to follow?

Yes
No

Was anything about this game difficult for you? If so, what was it?

No

What did you like about this game?

It was very simple to comprehend.

Was there anything you would change?

Yes. You should add a digital dice.

Please provide any additional feedback you have about this game.

Sudoku
Play the game and then answer the following questions.

Have you played a game like this before?

Yes
No

Did you have to spend a lot of time figuring out how to play this game?

Yes
No

Were the on-screen instructions easy to follow?

Yes
No

Was anything about this game difficult for you? If so, what was it?

Yes, I could not go back to the high socres once i started the game. If you did not put a uppercase letter it would not work. y

What did you like about this game?

It forced me to use my brain a little bit more.

Was there anything you would change?

A back button. I was not able to just put the letter. I was forced to put an uppercase letter. If you mess up on one and have to replace one it just ask the question and gives no choices.

Please provide any additional feedback you have about this game.

It is a whole lot easier to mess up in this one.

In Conclusion

After playing both games, please answer the following questions.

How would you rate your overall satisfaction with High Roll vs Low Roll?

Horrible

1
2
3
4
5

Great

Why did you give it this rating?

It was boring and it rolled my number and said I lost.

How would you rate your overall satisfaction with Sudoku

Horrible

1
2
3
4

Great

Why did you give it this rating?

It was really fun yet not the best thing I've ever played.

Would you play either of these games on your own device?

Yes - Both of them
Yes - High Roll vs Low Roll
Yes - Sudoku
No

If you would not play either game on your own device, why?

I don't play these types of games.
There was a problem with the design/functionality.
I didn't like them.
Some other reason.

Is there anything else you would like to say about your experience playing these games, or do you have any other suggestions?

Questionnaire 6

The Game Questionnaire

Pilot survey for reviewing a game prototype.

What is your first name?

Jonathan

What is your age range?

5-10
11-15
16-20
21-30
31-50
51+

If you are a student, what grade are you in?

Are you comfortable using a computer?

Yes, very comfortable.
No, I do not like using computers.
Somewhere in the middle.

Do you have any computer programming experience?

Yes

No

High Roll vs Low Roll

Play the game and then answer the following questions.

Have you played a game like this before?

Yes

No

Did you have to spend a lot of time figuring out how to play this game?

Yes

No

Were the on-screen instructions easy to follow?

Yes

No

Was anything about this game difficult for you? If so, what was it?

no

What did you like about this game?

It was a game of luck, and can be very addicting.

Was there anything you would change?

I would add a die to the screen for special effects

Please provide any additional feedback you have about this game.

I like the game and would play it again

Sudoku

Play the game and then answer the following questions.

Have you played a game like this before?

Yes

No

Did you have to spend a lot of time figuring out how to play this game?

Yes

No

Were the on-screen instructions easy to follow?

Yes

No

Was anything about this game difficult for you? If so, what was it?

It was time consuming because of the steps taken to enter the answer

What did you like about this game?

It made you think before entering the answers

Was there anything you would change?

Make the game more accesible by allowing the board to be clicked with the mouse cursor

Please provide any additional feedback you have about this game.

Overall the game is well formatted and easy to play, but requires undivided attention. Therefore, this game receives an 8/10.

In Conclusion

After playing both games, please answer the following questions.

How would you rate your overall satisfaction with High Roll vs Low Roll?

Horrible

1
2
3
4
5

Great

Why did you give it this rating?

It was fun

How would you rate your overall satisfaction with Sudoku

Horrible

1
2
3
4
5

Great

Why did you give it this rating?

It was fun but more complicated to play

Would you play either of these games on your own device?

Yes - Both of them
Yes - High Roll vs Low Roll
Yes - Sudoku
No

If you would not play either game on your own device, why?

I don't play these types of games.
There was a problem with the design/functionality.
I didn't like them.
Some other reason.

Is there anything else you would like to say about your experience playing these games, or do you have any other suggestions?

No