HOPSCOTCH

Game Design Project #1

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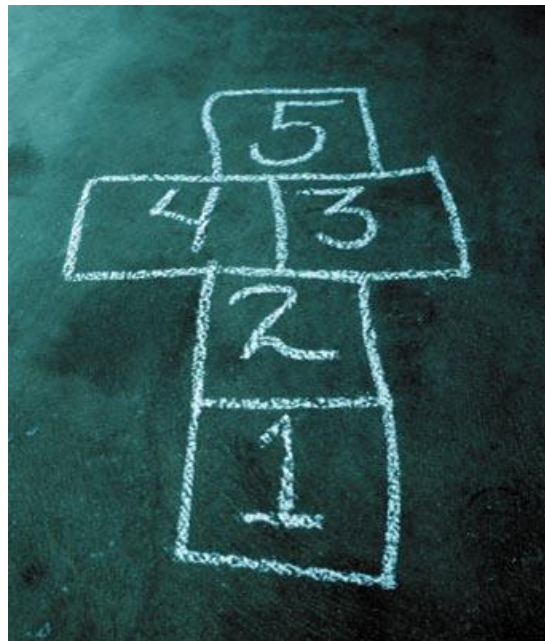
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Part I

Problems in the original hopscotch

When playing the original version of hopscotch, after a few minutes some problems can be detected, which are listed below, with no special order:

1. It takes a long time to set up the course, especially when playing indoors, where no chalk can be used. The set up can be part of the experience, but many times the time to play is limited.

2. You may not have chalks, tape or sand to set it up.

3. Some stones are better than others, so some players may have advantage over others if their markers bounce less.

4. The game can take too long to finish, especially with more than two players.

5. Waiting for your turn is boring. There is nothing to do for a player during others turns.

6. There is almost no difference between the turns, always having to do almost the same type of hops.

7. There is no story to make it more interesting (well, actually there is, based on the Divine Comedy, but it is not taken into account when playing).

Not all the problems listed here will be addressed when designing the new versions of hopscotch, but at least some of them, and they will be mentioned in each design.

Brainstorming for new ideas

The ideas are classified in four categories, as recommended on the assignment instructions: Technology, Story, Game Mechanics and Aesthetics. There are many more ideas in the category of Game Mechanics, as I see hopscotch as a game that is successful because of its simplicity and relatively easiness to play in many different locations.

Technology

1. Use a paddle and tennis balls to aim for the squares.

2. Use electronic squares with sensors, so you can compete in the Internet.

3. Folding hopscotch mat you can carry easily from one place to another.

4. Use magnet bars to create every square.

5. Using a deck of cards that give each player especial abilities each round.

6. You could get a card every time you get to the haven.

7. A hopscotch platform hanging from trees, so it is tough to keep balance.

8. Some or all squares are buckets with water or mud.

9. Doing hopscotch with skates.

10. Hop from one square to another using a jumping rope.

11. The surface of the course could be an inflatable bouncer.

Story

12. Having a final boss and lesser enemies to defeat while advancing.

13. Having several players would make it easier to defeat the final boss.

14. There could be several courses being played at the same time, and the players are in the Olympics, competing to see who is first.

15. The haven is an island with treasure. Every time you go to it you can steal treasure.

16. The players have to escape from dinosaurs before they are eaten.

Game Mechanics

17. Have several players at the same time.

18. The square's position could change in real time.

19. Each square requires to be touched with a different part of the body.

20. Throwing dice decides which square is the haven.

21. Hold one or several balls while hopping (to practice juggling, soccer, etc.).

22. Players need to collect pieces to make the next square.

23. Having a limited time to finish each round.

24. Players waiting for their turn could move the player's marker while he or she is hopping or while being at the haven.

25. When making a mistake, the player must remain on the square where he or she failed.

26. When making a mistake, you go to the haven, and your teammate has to rescue you from there.

27. Hold a spoon with your mouth, with something on the spoon (an egg or a small ball).

28. You can throw as many markers as you want before start hopping. Collecting them give you points.

29. Heavy stones give fewer points than light stones.

30. The player can use points to buy extra chance to throw the marker.

31. The waiting players can throw balls to the current player.

32. Hopping with the hands or feet tied.

33. Each player has a number of lives. Each mistake cost lives.

34. The course could have big squares and the players have the eyes covered. Other teammates would help the player with verbal instructions.

35. Players have to say aloud the name of the color of the square where they hop.

36. Having a basket close, the players must bounce a basketball and when getting to the haven, score at the basket.

37. Players have to say aloud the number of the square where they hop.

38. Some squares have math operators. Each round you have to get a number by adding, subtracting, etc. with numbers you hop on.

39. When getting to the haven you have to take something with the mouth and bring it to the beginning.

40. When getting to the haven, the player gets a ball or water balloon and throws it to another player in another course.

41. The squares have arrows, and each time you can follow a different path to the haven.

42. Some of the squares require the player to hop back-side.

Aesthetics

43. Squares have binary numbers.

44. Squares that shine in the dark.

45. Space theme, parting from the Earth and getting to the moon by hopping.

46. Football theme, advancing yards with each square you hop on.

47. Formula 1 theme, being the haven the end line.

48. The course is a spiral, with a letter of the alphabet on each square.

49. Each square has a different shape. You can only hop on a square of the same category.

50. Each square has the shape of a letter.

51. Theme of hopping on a wooden plank, having water below, as in a pirate ship.

52. Each square has a sports icon, so it is easier to remember which one is your next square to go if you don't have markers.

Part II

Three new ideas for hopscotch

Based on the ideas that came during the brainstorming, these are the three new ideas that seemed more promising.

1. **Team rescue hopscotch**

- This version of hopscotch requires teams to work. At least there will be 2 teams of 2 people each, also being accepted more teams with more members on them.

- The squares have to be wide, as there will be more than one person on them at the same time.

- During a team turn, each person on the team take turns to throw the marker and hop forward and backward, using the same mechanics as in the original hopscotch. So first, one member would complete the course with the marker on 1, and then another member would carry on with 2, etc.

- If a player fails when throwing the marker, the next team takes the turn. If a player fails while hopping, he or she goes to jail, being the haven the jail.

- If a player gets to hopping to the haven and there are any of his or her teammates there in jail, both have to make the trip back. They would put their arms over the other member's shoulders. When hopping, the one on the left would use the right foot, and the one on the right, the left foot. When getting to the square where their marker is, the current player has to lean down to get it.

- If they succeed when hopping together back, the prisoner is released. If they make any mistake, as stepping on a border or falling down, the prisoner is released, but the current player goes to jail, and the team's marker retrocedes one step on the course.

- If the marker goes below 1, the team losses.

- The winner team is the one who completes the 9 squares, or the last one who survives.

This version especially addresses the problem of players getting bored while waiting for their turn to come. In this case, a whole team would be waiting for their turn, but people in jail waiting to be rescued

would actively encourage their team members to come to rescue them. This also adds variety to the mechanic of each turn, as the fact of sometimes having to rescue your teammates, makes it more exciting. For other teams not currently playing, just by watching how others behave when hopping together would add enough interest to decrease the boredom.

2. Dancing hopscotch

- In this version, four of the squares of the course have a symbol drawn on them. When the marker of the player lands on one of these squares, the player has to change the way he or she will hop that turn. These symbols are:

    - ↑↓: When hopping forward, the player must use only his or her left foot. When going back the way, he or she can only use the right foot.

    - ∩: The player can only use one foot, and will hop always from his or her square to two squares in advance. The same thing happens when going back the way to the start. So he or she would hop from the start to 2, then to 4, 6, 8 and haven. The same backwards.

    - ≈: The player has to hop with both feet together, even on the squares that are side by side, having to hop one by one. The same would apply for the trip back.

    - ↔: The player hops always looking to one side instead of looking to the front. For the squares that are side by side, he or she will hop one by one, also facing to one side.

- All other mechanics remain the same from the original hopscotch.

This version is a small add to the original hopscotch, trying to solve the problem of the game being repetitive. The changes in the way the players have to hop, add some challenges during half of the experience, which would increase interest during the experience.

3. Betting hopscotch

- Apart from the markers, there are especial markers which are coins. Each player starts the game with a marker and one coin.

- Each player takes turns to play, switching after one makes a round trip from the start to the haven and back, or when a player fails.

- After a player has thrown the marker to the right square, he or she can bet using his or her coins. The player can throw any number of coins to any square. If a coin lands out of the course or on a border, that coin is lost.

- After betting the coins, the next player can use his or her own coins to destroy the current player coins on the course. If one of this coins lands where one coin of the current player is, the player's coin is lost. If it lands on an empty square, the coin remains there.

- After this attack, the player starts hopping in the traditional way, avoiding all the squares with coins or markers on them.

- If the player succeeds, he or she gets his or her coins back multiplied per 2, plus the opponent's coins on the course, plus one. If he or she fails, the opponent gets all the coins on the course.

- The game ends when someone has 10 or more coins, or when someone finishes the full course, whichever comes first.

This version also focuses on the problems of the waiting players being bored, and the variety during the gameplay. The waiting players can destroy the current player's coins and make the course more difficult to beat as it is more crowded with obstacles. The variety also gets incremented because as the game advances, the players have more coins to bet in different ways and make different strategies.

Part III

The final idea: Betting hopscotch

Game rule set

Game setting

The game can be played with a minimum of 2 players, not having a maximum number. A hopscotch course is needed in order to play, being valid any version of the course. Each player will need a marker and several other markers called 'coins'.

How to play

Every player will start with a personal marker, which can be any object smaller than the size of the squares of the course. Apart from this, every player will also start with one coin, which can be any object with the same description of the markers.

One of the players will be chosen to start the game. He or she will stand in front of the first square of the course, with his or her body straight, and will throw the marker to the first square. If the marker lands on another square, or is touching a line, or lands outside of the course, the player's turn ends and the next player's turn takes place.

If the marker lands correctly on the square, then the player can choose to bet his or her coins. The player can throw any number of his or her coins to the course, aiming to any of the squares on it. If a coin lands on the haven square, it is returned to the player. If it lands on an empty square, it remains there. If it lands on a square with another coin it is lost. If it lands on a line or outside of the course, it is lost. If the marker did not land on the correct square, the player can spend one coin to have another chance of throwing the marker. He or she can do this as many times as wanted, as long as the player has enough coins.

When the current player is done betting, then the next player, called the opponent, has the opportunity to attack the current player. The opponent can throw any number of his or her stones
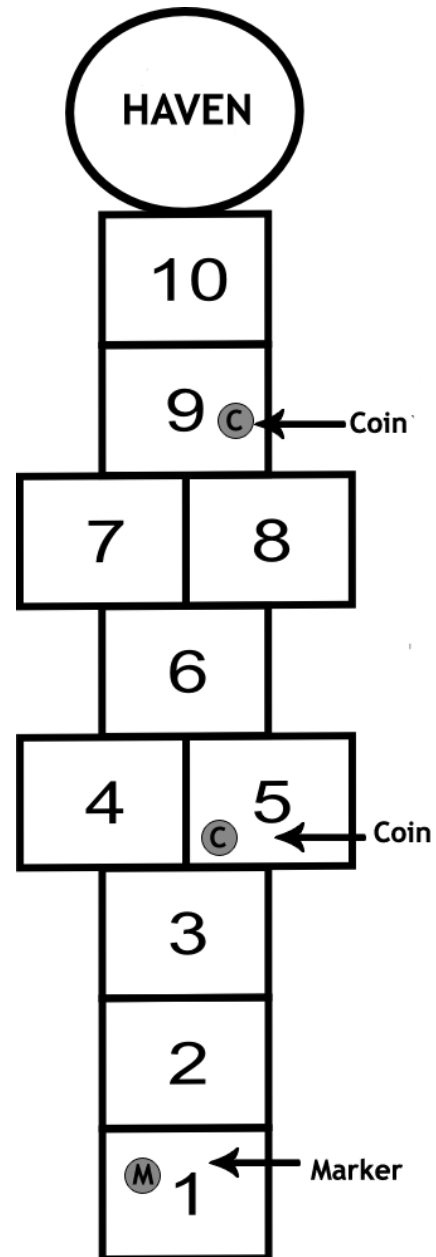
to the course. If a coin lands on a square with a player's coins, that coin is destroyed, and the opponent gets his or her coin back. If a coin lands on the haven, it is returned to the opponent. If it lands on an empty square or on a square with a marker, it remains there. If it lands on a line or outside of the course, it is lost.

When the opponent is done attacking, the current player starts his or her way to the haven. He or she has to hop on all the squares using only one foot for this, except for the squares that are drawn side by side, for which the player will use one foot for each of them at the same time. The player will avoid hopping on the squares with a marker or a coin. The player can hop on the haven with any number of feet, and touch its lines without penalty. Then the player will do the same trip back to the starting point, avoiding the same squares, except the square with his or her marker, on which he or she will land to recover it using one or two hands. If during any of this process the player touches a line, or hops out of the course, or uses two feet on the same square, he or she will fail.

If the player succeeds the trip, he or she will get all the coins he or she bet multiplied by 2, plus all the coins remaining from the opponent, plus 1. If he or she fails, the opponent gets all the coins on the course, and the player's marker will remain on the course. Whichever the result is, the opponent's turn starts, repeating the same process.

Game ending

When a player has 10 or more coins, he or she wins the game. If a player completes successfully the course as many times as squares are in it, he or she wins the game.

First play testing

During the first play testing, there were two players playing the game, while I was watching it. It took around 15 to 20 minutes to finish the game, and it finished with one of the players having enough coins to win. Paper balls were used as both markers and coins, having the shape similar to a sphere.

In the beginning both players wanted to use the mechanics of betting and attacking with the coins. In the third turn, one of the players won several coins when betting and completing the course, while the opponent lost all her coins when trying to attack. The players felt the game was not balanced at that point. However they kept playing and the rich player tried to make use of his coins, buying new opportunities to throw the marker, and betting several times. This lead to a situation where the rich player almost ran out of coins, while the other player kept winning coins at a lower rate but constantly. Finally this player made a big bet and succeeded, which made her win the game.

Good things:

- The game did not take too long to finish. Around 20 minutes is a desired length for it to be replayable.

- The players enjoyed the betting system, as they mention it was their favorite part of the game.

- Getting a coin for finishing the course lets players recover in case of losing many coins.

- Switching turns constantly keep the players entertained and willing to keep playing.

Not so good things:

- A player who gets too rich has more chances of winning the game fast.

- The paper marker bounced too much, making the players fail very often when aiming to the last squares on the course.

- Players almost never used the option of buying new chances to throw the marker. They felt it was of no use.

- Players said they did not care of losing their coins when betting.

- Some rules about coins colliding with others and with markers were not clear.

- Attacking the current player seems to not give advantage, being too risky.

- Getting 10 coins seemed to be very difficult, taking a long time to achieve it.

In order to make the rule set more exhaustive and to balance the game between the player and opponent, the following rules were added or changed to the previous rule set.

- When betting, if a coin lands on a square with another coin or the player's marker, the coin is given back to the player. *Before, the coin was lost*.

- When the opponent throws a coin on a square with a coin of the current player, the opponent gets his or her coin back, plus the coin from the current player. *Before, only the own coin was retrieved*.

- When hopping, the player must avoid the squares with coins *and markers*.

- If the player fails to complete the course, *his or her stone remains on the square where it was*.

- Instead of winning when having 10 coins, only 7 coins are needed to win.

- If a marker is moved when throwing coins or markers, it is restored to the square where it was.

- If a coin is moved when throwing other coins, its final landing place is its valid place. So if it ends on a line or outside the course, it is lost.

- When aiming the marker, the player can choose to spend 3 coins to automatically place the marker on the right square.

Apart from these changes in the rules, the paper balls used to play the first time were also modified, making them plainer, more similar to a coins shape. This way they would not bounce so much, making the game faster and more dynamic.

Second play testing

The second time, another player played with me. Since the beginning it was noticeable how easier it was to aim with the new markers being plainer. The game ended in 5 to 10 minutes, with a player getting 7 coins. This was achieved after the player betting two coins and finishing the course successfully.

Good things:

- The markers were more effective, making the game faster.

- The attacking player had better reasons to destroy the player's coins, as he keeps them.

- Having markers and coins on the course made it difficult to complete the course, which keeps the game more balanced.

Not so good things:

- The game was too fast with the new markers being easier to aim.

- The attacker could win just by capturing other player's coins if he or she aims very well. This may break the balance.

Now that the markers work better and it is easier to aim, the number of coins to win should increase, so the initial amount of 10 should be good to keep the game running for some more minutes.

To avoid the possible strategy of an attacker to keep destroying and stealing the player's coins, a new rule could be introduced to improve the balance:

- o After the player has finished betting, the next player, called the opponent, can attack the current player. The opponent can spend one of his or her coins to aim for one of the player's coins. If the coin land on another coin's square, the opponent gets both coins back. If the opponent misses, the coin is given back to his or her.

Even though this rule could keep the balance between player and opponent, it also takes away the risk factor for the opponent, which is one of the goals of the game, so it would have to be tested in depth.