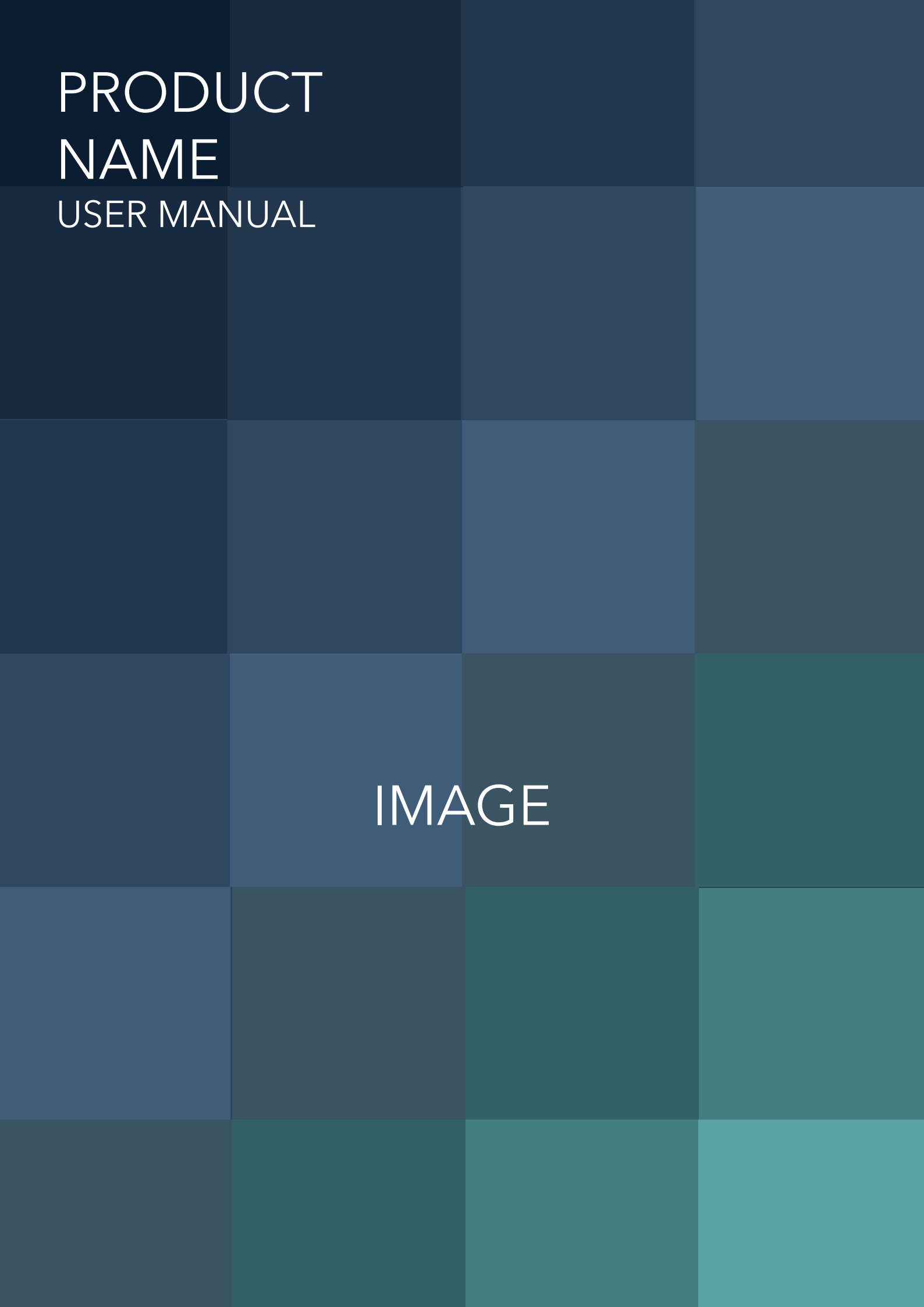
PRODUCT NAME

USER MANUAL



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INTRODUCTION

WHAT IS IT?

The ... is a tool for children age 9-12 to learn the way of thinking used in computer programming. It consists of a robot, tangible command blocks and a designable game board. The command blocks have shapes on them that symbolize a certain action, like move forward, turn or loop. The robot will execute these commands in the order they are put in the robot. The game board consists of black, gray and white puzzle pieces. The goal of the game is to get to the white tile. Children can build the board themselves by connecting the puzzle pieces. In this manual there are some examples of possible game board designs given.

CLASSROOMS

The ... is meant to be used in classrooms. Children can make groups and work on different assignments. They can improve collaboration skills while trying to achieve the goal together. There is also a competetive element, so that children can play against each other on the same game board. There is no computer needed to play the game.

WHY USE ...?

The ... teaches children important skills for the future. Not only does it improve their computer programming skills; they also learn to work together, be creative and analyze problems. It makes it possible to have a hands-on approach in something like computer programming, without actually needing to have many computers in a classroom.

WHICH GAMES CAN YOU PLAY?

You can play three different games with ... . You can collaborate: try to achieve the goal together; you can compete with one robot: take turns in trying to achieve the goal, and you can compete with two or more robots: one robot has to achieve the goal, while the others have to prevent the first robot from achieving this goal.

INSTRUCTIONS: COLLABORATION

SET UP

BUILDING THE GAME BOARD

The youngest player begins. After that the player on left, moving clockwise to the next player. The first player chooses a puzzle piece and places it somewhere on the table. The second player chooses a second puzzle piece and connects it to one of the sides of the first puzzle piece. After that the next player, until all puzzle pieces are used. While making the puzzle board, make sure that:

- The goal tile is not only connected to pits;
- The goal tile is not blocked by pits;
- The starter tile is not connected to the goal;
- The starter tile is not blocked by pits.

After that, place the robot on the starter tile.

HOW TO PLAY

The goal of the game is to get the robot to the goal tile safely. Therefore the robot has to avoid the pits. The players must work together to achieve this goal. The robot is controlled using command blocks.

STARTING THE GAME

EVERY ROUND

The same player that also places the first puzzle piece can start. Player 1 chooses the first action and places this command block on the robot. After that Player 2 chooses a block and places it on the robot, etc..

WINNING THE GAME

When the complete path is set, the players discuss whether the robot will achieve its goal or whether the path is wrong and needs to be changed. When all players agree, the start button is pressed and the robot will start to walk its path. If the robot achieves the goal, the players win.

INSTRUCTION: COMPETE WITH ONE ROBOT

SET UP

BUILDING THE GAME BOARD

The game board changes every turn. The player on the left of the player who's turn it is can start. After that the player on the left of that player, moving clockwise to the next player. The first player chooses a puzzle piece and places it somewhere on the table. The second player chooses a second puzzle piece and connects it to one of the sides of the first puzzle piece. After that the next player, until *(number of puzzle pieces each round)* puzzle pieces are used. The player who's turn it is cannot place any tiles. While making the puzzle board, make sure that:

- The goal tile is not only connected to pits;
- The goal tile is not blocked by pits;
- The starter tile is not connected to the goal;
- The starter tile is not blocked by pits.

Number of puzzle pieces each round:

- Round one: 8 puzzle pieces
- Round two: 12 puzzle pieces
- Round three: all puzzle pieces

After that, place the robot on the starter tile.

HOW TO PLAY

The goal of the game is to get the robot to the goal tile safely. Therefore the robot has to avoid the pits. Every player tries to create the shortest possible path by themselves. Then the other players get a chance of creating a shorter path. Points will be rewarded for the achievements. The player that has the most points after six rounds, wins the game.

STARTING THE GAME

EVERY ROUND

The youngest player can start. The other players build the game board. The path has to be possible. Player 1 has the first turn and places the command blocks in a specific order to follow the path. If the robot does not achieve the goal, the player will get 0 points and it is

the turn of the next player. If the robot achieves the goal, the player will receive 5 points. Now the other players get a chance of achieving the goal by using less command blocks. For every command block less, the player can "steal" points from player 1. If player 2 used two less command blocks than player 1, player 2 will get 2 points and player 1 will only have 3 points left. A player cannot have less points than 0, so these points cannot be stolen. After that it is the turn of Player 2.

After all players have played with this amount of puzzle pieces once, round 1 ends and round 2 starts. Round 2 has more puzzle pieces. After round 2 ends, round 3 begins and uses all puzzle pieces.

WINNING THE GAME

The game ends when all rounds have been played, and each player has had the same amount of tries. The player with the most points wins the game.

INSTRUCTION: COMPETE WITH MULTIPLE ROBOTS

SET UP

BUILDING THE GAME BOARD

The game board changes every round. The youngest player begins, the next round the player on the left of the youngest player, etc.. The first player chooses a puzzle piece and places it somewhere on the table. The second player (on th left of player 1) chooses a second puzzle piece and connects it to one of the sides of the first puzzle piece. After that the next player, until all puzzle pieces are used. While making the puzzle board, make sure that:

- The goal tile is not only connected to pits;
- The goal tile is not blocked by pits;
- The starter tile is not connected to the goal;
- The starter tile is not blocked by pits.

After that, place the robot on the starter tile.

HOW TO PLAY

The goal of the game is to defeat the robot of the other person. One robot has to achieve the goal tile. The other robot has to stop the first robot from achieving its goal by shooting. There is an extra command block in this game, called the shooting command. Only the second player can use the shooting command block. When the command is executed, the robot will shoot a ball. The ball can be given back to the robot every time it misses.

STARTING THE GAME

Both players play at the same time. They use the command blocks to define a path. The second player can use the shooting command block to try to hit the first robot.

EVERY ROUND
Both players add their command blocks at the same time. Then they press the start button at the same time to execute the commands.

WINNING THE GAME

For the first player the goal is to get to the goal tile before the second players shoots the first robot. The goal for the second player is to shoot the first robot.

INSTRUCTION: COLLABORATE AND COMPETE

SET UP

BUILDING THE GAME BOARD

The game board changes every round. The players make teams of 2 or 3 peope. The team with the youngest player begins, the next round the team on the left, etc.. The first team creates the puzzle board together. They try to make it as hard as possible, but still follow the rules mentioned below. The second team tries to get to the goal tile. The next round the next team can make the board. While making the puzzle board, make sure that:

- The goal tile is not only connected to pits;
- The goal tile is not blocked by pits;
- The starter tile is not connected to the goal;
- The starter tile is not blocked by pits.

After that, place the robot on the starter tile.

HOW TO PLAY

The goal for the first team is to make a very difficult puzzle board together. The goal for the other team is to get to the goal tile.

STARTING THE GAME

The first team creates the difficult (but still possible) puzzle board, following the rules mentioned in the set up. The second team now gets 3 tries to achieve the goal.

EVERY ROUND
If the second team (that has to get to the goal tile) gets to the goal tile in 1 try, the team gets 3 points, and the first team gets 0 points. If they get it in 2 tries, the team gets 2 points, and the first team gets 1 point. If they get it in 3 tries, the team gets 1 points, and the first team gets 2 points. If the team does not get it at all, the first team gets 3 points, and the second team 0.

WINNING THE GAME

The game ends after every team has had 3 turns (3 different boards). The team with the most points wins the game.