

# Assembly Book

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#### I. V-Bot



1. Assemble the 1x2 block(hole) with the 1x2 block on the flat 2x4 block.



2. Assemble the 1x2 block, 2x6 block, 1x4 block and 2x2 block on the structure which is made in 1 above.



3. Assemble the 2x2 block, 2x6 block and 1x8 block on the structure of 2.



4. Assemble the 2x2 block and 2x6 block on the structure of 3.



5. Assemble the 1x4 block(hole) and the 2x8 block on the structure of 4.



6. Assemble the 2x4 block and 2x6 block on the structure of 5.



7. Assemble the 2x3 block, 1x2 block, and 2x4 block on the structure of 6.



8. Make an arm of the robot by assembling the 1x6 block(hole) and 2x4 block.



9. After assembling the 1x8 block and 1x10 block(hole) on the 2x4 and 2x3 block, connect the 2x2, 2x8 and 2x6 block and assemble on them. Assemble the two structures symmetrically to make legs.

#### 2. Catapult-Bot



1. Assemble the 1x8 block, 2x8 block, and 2x6 block on the main block.



2. Assemble the 2x6 block and 2x4 block and then insert them to the 2x8 and 2x6 block which are assembled from 1 above.



3. Assemble the 2x4 block on the structure of 2.





4. Assemble the 2x6 block on the structure of 3.



5. Assemble the 2x4 and 2x2 block on the structure of 4.



6. Fix the two 2x10 blocks(hole) with the connection axle and then assemble them on the 2x8 block.



7. After inserting the connection axles to the both side of the 2x10 block(hole) which is made from 6 above, assemble the 2x6 block(hole).



8. Assemble the 2x4 and 1x4 block on the structure of 7.



9. Assemble the 1x2 and 1x6 block on the structure of 8.



10. Insert the connection axle to the both sides of the 2x10 block(hole).



11. After inserting the wheel block to the connection axle of 10, assemble it with the body of catapult-bot.



12. Now, catapult-bot is finished.

# 3. Big-Head Bot



1. Assemble the 2x4 block to the 2x8 block and the 1x12 to 2x6 block.



2. Make an arm by assembling the 2x6 block with the structure of 1.



3. Make a leg by connecting the 2x2, 2x4 and 2x6 block.



4. Connect the assembled arms of 2 to the legs of 3.



5. Assemble the 2x2, 2x4 and 1x6 block to the CPU block to make the robot's face. And assemble the LED block to the back of the CPU block.



6. Using the 200mm cable, Connect the blue LED and red LED to the OUT 1, 2 port of the CPU block respectively. This is finished Big-Head Bot.

#### 4. Bike-Bot



1. Turn the 2x3 block up and assemble to the CPU block.





2. Assemble the 2x6, 2x8 and 2x4 block with the CPU block.



3. Insert the wheel to the DC motor and assemble with the structure which is made in 2 above.



4. Assemble the 2x4 and 2x6 block with the structure of 3.



5. Assemble the 2x6 and 1x2 block with the structure of 4.



6. Assemble the 2x4 block with the structure of 5.



7. Assemble the 2x8 and 2x2 block with the CPU block.



8. Assemble the 2x2 and 2x4 block with the structure of 7.



9. After inserting the wheel axle to the wheel block, put in the wheel. Assemble the 2x6 block and wheel block with the structure of 8.



10. Assemble 1x8, 1x2 and 1x12, 2x4 block with the structure of 9.



11. Assemble the 1x6, 2x6 block and 2x2, 2x3 block with the structure of 10 to make a handle.



12. Plug the DC motor cable to the OUT1 of the CPU block.

Now, Bike-Bot is finished.

# 5. Fan-Bot



1. Assemble the 2x4 and 2x8 block to the back of the CPU block.



2. Assemble the 2x4, 2x6 block with the 2x8 block which is connected to the CPU block. Then, put in the contact sensor board on it.



3. Place the 2x8 block on the 2x6 block and assemble the 2x4 block on it.



4. Assemble the 2x6 and 1x4 block(hole) with the structure of 3.



5. Place the 1x6 block(hole) on the 1x8 block and assemble them using the connection axle. Then, connect with the 1x4 block(hole) of the structure of 4.



6. Assemble the structure of 5 above on the CPU block.



7. Assemble the buzzer block and DC motor with the upside of the structure of 6.



8. Insert the wheel guide to the DC motor and the LED block to the CPU block.



9. After cutting the electric fan wing in the next page of the workbook 59 pages, attach 2 folds with the grass and prepares. Attach the double-sided tape to the back of the wing.



10. Fix the electric fan wing to which a double-sided tape is attached to the wheel guide. Connect the DC motor cables with OUT1 of the CPU block.



11. Using the 200mm cable, connect the blue LED to OUT 2 and red to OUT 3. Using the 200mm cable, connect the buzzer block to OUT4 of the CPU block.



12. Using the 200mm cable, connect the contact sensor with the IN1 of the CPU block. This is the finished Fan-Bot.

#### 6. Mart-Bot



1. Assemble the 2x8, 1x8, 2x2 block on the CPU block.



2. Insert the 2x6 and 1x2 block to the assembled block of 1.



3. Assemble the 1x12 and 1x8 block on the CPU block.



4. Assemble the 2x6 and 2x2 block, and then connect them with the structure of 3.



5. Assemble the wheel block between the 2x6 and 2x4 block.



6. Assemble the 1x6, 2x4 and 2x6 block and make a man-model.



7. Assemble 1x4, 1x2 block, 1x10 block(hole) and the arm part of the man-model with the CPU block.



8. Assemble the LED block with the structure of 7.



9. Connect the 2x4 block to the 2x6 block to fix with the DC motor, and put in the wheels.



10. Assemble the 2x4 block on the structure of 9 in order for the robot not to be disjointed.



11. Connect the DC motor cable OUT1 of the CPU block. Using the 200mm cable, connect the blue LED to OUT 2 of the CPU block, and red to OUT3.



12. Now, Mart-Bot is finished.

# 7. Blue Crab-Bot



1. Assemble the 2x6, 1x8 and 2x2 block to the back of the CPU block.



2. Assemble the 1x12 block, 1x10 block(hole), 2x3 and 2x6 block with the structure of 1.



3. Assemble the 2x2, 2x3, 2x4 block, 1x6block(hole) and the 2x8 block with the structure of 2.



4. Assemble the 1x2, 2x4 and 2x6 block with the structure of 3.



5. Assemble the 1x4 block(hole), 2x2. 2x4 and 1x2 block with the structure of 4.



6. Assemble the 2x3, 2x8 and 2x6 block with the structure of 5.



7. After inserting the wheel to the DC motor, assemble with the structure of 6. On it, assemble the 1x6 block for the balance.



8. Assemble the 1x2 and 1x4 block to make chelas.



9. Using the 1x4, 1x2 block(hole) and connection axle, finish the leg part.



10. Assemble the LED block to the CPU block.



11. Connect the DC motor cable to OUT1 of the CPU block. Using the 200mm cable, Using the 200mm cable, connect the blue LED to OUT 2 of the CPU block, and red to OUT3.



12. Now, Blue Crab-Bot is the finished .

#### 8. Alarm - Bot



1. Assemble the 2x6, 2x8, 1x12 and 2x4 block to the CPU block.



2. Assemble the 2x2, 1x4, and 2x4 block with the structure of 1.



3. Using the 2x6 block, wheel guide, DC motor and 1x6 block, assemble with the opposite side of the structure of 1.



4. By assembling the 1x4 block, 1x6 block(hole) and 2x4 block, make a robot's arm.



5. After inserting connection axle to the 1x2 block(hole), connect to the 1x6 block(hole) of the arm and assemble with the structure of 4. Assemble the buzzer block to the CPU block.



6. Insert the DC motor cable to the OUT1 of the CPU block. Using the 200mm cable, connect the buzzer block to OUT2 of the CPU block. Now, Alarm-Bot is the finished.

# 9. Mole - Bot



1. Assemble the 2x4 block to the wheel block and LED block to the CPU block.



2. Assemble the 2x2 and 2x6 block with the structure of 1.



3. Assemble the 2x8 and 2x3 block with the structure of 2.



4. Assemble the contact sensor block and wheel block with the structure of 3.



5. Assemble the 2x6 and 2x4 block with the structure of 4.



6. Assemble the 2x8, 1x12 and 2x4 with the structure of 5.



7. Assemble the 2x4 block, buzzer block and the contact sensor block with the structure of 6.



8. Assemble the 2x4, 2x8 and 2x6 block with the back of the CPU block.



9. Putting the 2x4 block in the middle, built up with the 1x2 and 2x4 block.



10. Assemble the 2x6 and 2x4 block with the structure of 9 to make the hammer.



11. Using the 200mm cable, connect the blue LED to OUT1 and red to OUT2 of the CPU block. Using the 450mm cable, connect the buzzer block to the OUT3.



12. Using the 200mm cable, connect the contact sensor to IN 1, 2, 3 of the CPU block. Now, Mole-Bot is finished.

#### 10. Roulette - Bot



1. Assemble the 2x8 block and 1x10 block(hole) with the CPU block.



2. Assemble the 1x8 and 1x4 block with the CPU block.



3. Assemble the 2x3 block, 1x6 block(hole) and 1x2 block with the structure of 2.



4. Insert the connection axle to the 1x4 block(hole) and connect with the structure of 3. Then, assemble the flat 2x5 block, too.



5. Assemble the 1x2, 2x2 and 2x6 block with the structure of 4.



6. Assemble the infrared ray sensor block and 1x2 block(hole).



7. Assemble the 2x3 block with the structure of 6 and then assemble the 1x4 block(hole) with the structure using the connection axle.



8. Assemble the 2x4 block and infrared ray sensor with the structure of 5.



9. Assemble the 1x4 and 1x12 block with the structure of 8.



10. Assemble the LED block with the structure of 9.



11. Assemble the 2x4 block like inserting between 2x6 blocks.



12. Assemble the 2x4 and 2x6 block with the structure of 11.



13. Assemble the 2x4, 1x6 block(hole), 1x6 and 1x8 block with the structure of 12.



14. Assemble the wheel guide and DC motor with the structure of 13.



15. Assemble the structure of 10 with the another structure DC motor connected to using the connection axle.



16. Attach the rotary plate to the wheel guide by a double-sided tape.



17. Connect the DC motor cable with OUT1 of the CPU block. Using the 200mm cable, connect the blue LED to the OUT2 and red to OUT3.



18. Using the 200mm cable, connect the infrared ray sensor to the IN1 of the CPU block. Now, Roulette-Bot is finished.

#### II. VrrmVrrm- Bot



1. Assemble the 2x4 blocks with the CPU block.



2. Assemble the 2x3, 2x2, 1x4 and 2x6 block with the CPU block.



3. Assemble the 2x6 and 2x2 block with the structure of 2.



4. Assemble the 2x4 and 1x6 block with the DC motor.



5. Assemble the 2x8 and 2x6 block with the DC motor.



6. Assemble the 2x4 and 2x8 block with the structure of 5.



7. Assemble the 2x6, 2x4 and 1x12 block with the structure of 6.



8. Assemble the 1x8, 1x4 and 2x3 block with the structure of 7.



9. Assemble the structure of 8 above with the CPU block.



10. After assembling the 2x6, 2x2 block and LED block with the structure of 9, put the wheel into the DC motor.



11. Connect the DC motor cable to OUT1 and 2 of the motor cable. Using the 200mm cable, connect the blue LED to OUT3 and the red to OUT4 of the CPU block.



12. Now, Boong boong-Bot is finished.

# 12. Puppy - Bot



1. Assemble the 1x2, 1x4 blocks etc and other blocks on the main block.



2. Assemble the 2x4, 2x6 block and CPU block to the back of the CPU block to make the head of the robot.



3. Insert the connection axle between the 1x6 block(hole) and 1x2 block(hole), and then assemble the infrared ray sensor block on it.



4. Assemble the 2x2, 2x4, 2x6 and 1x4 block with the structure of 3.



5. Assemble the infrared ray sensor block which is connected with the various blocks in head part of the robot.



6. After assembling the DC motor to the back of the CPU block, insert the wheels.



7. Connect the 2x3, 2x4 and 1x12 block with the DC motor.



8. Assemble the 2x4, 2x2 and 1x6 block with the DC motor to make the tail part.



9. For the robot's balance and prevention of disassembly, Assemble the 2x3 block on it.



10. Assemble the 2x6 and 2x8 block with the CPU block to make the fore leg part.



11. Connect the left and right DC motor cable with OUT1 and 2 of the CPU block. Using the 200mm cable, connect the infrared ray sensor to IN1 of the CPU block.





12. This is the finished Puppy-Bot.

# 13. Giant - Bot



1. Assemble the 1x4, 1x2, 2x2 and 1x6 block on the main block.



2. Assemble the 2x4, 2x6, 2x3 block and 1x6 block(hole) on the main block.



3. Assemble the CPU block with the structure of 2.



4. Assemble the 2x4, 2x2 and 2x8 block with the DC motor.



5. To make the leg part of the robot, assemble the 2x6 and 2x2 block with the structure of 4.



6. Using the 2x2 and 2x6 block, connect the CPU block with the leg part of the robot.



7. Connect the 1x8 block, 1x10 block(hole) and 2x4 block.



8. Using the connection axle, connect the 2x6 and 2x2 block with the structure of 7 to make the arm part.



9. Connect the arm part of the robot to the second hole from the bottom of the block which is assembled with CPU block (hole).



10. Insert the wheel to the axle of the DC motor, and then assemble the  $2x^2$  and  $2x^4$  block with the DC motor.



11. Assemble the contact sensor block to the back of the main block.



12. Connect the left and right DC motor cable with OUT1 and 2 of the CPU block. Using the 200mm cable, connect the contact sensor to IN1, IN2 of the CPU block.

# 14. Remote Control-Bot



1. Assemble the 2x8 block with the CPU block.



2. Assemble the 2x4 and 2x8 block with the CPU block.



3. Assemble the 2x4 and 2x6 block with the structure of 2.



4. Assemble the 1x2, 2x3 block and LED block with the structure of 3.



5. Assemble the DC motor with the main block.



6. Assemble the structure of 4 above with the main block.



7. Assemble the 2x4 and 2x3 block to the main block.



8. Assemble the 2x2, 1x2, 1x8, 1x4 and 1x6 block to the main block.



9. Insert the wheel to the DC motor, and then assemble the support block with the main block.



10. Using the 1x8, 2x6 block, contact sensor block and 2x8 block, make the wire remote control.



11. Connect the left and right DC motor cable with OUT1 and 2 of the CPU block. Using the 200mm cable, connect the blue LED block to OUT3 and red to OUT4 respectively.



12. Using the 450mm cable, connect the contact sensor of the wire remote control to IN3,2,1 respectively.

# 15. Bumper - Bot



1. Assemble the DC motor with the main block.



2. Assemble the 2x2, 1x6 and 2x3 block with the main block.



3. Assemble the 1x12 and 2x3 block with the structure of 2 to make the bumper of the robot.



4. Assemble the 1x6, 2x6 block and the wheel block with the structure of 3.



5. Assemble the 2x4 and 2x8 block with the CPU block.



6. Assemble the 2x4 and 2x6 block with the CPU block.



7. Assemble the 2x8 block with the bottom of the CPU block.



8. Assemble the structure of 7 above with the main block.



9. Assemble the contact sensor block with the main block.



10. After inserting the wheel to the axle of the DC motor, assemble the support block to the main block.



11. Connect the DC motor cable to OUT1 and 2 of the CPU block. Using the 200mm cable, connect the left contact sensor to IN1 and the right to IN2.



12. Now, Bumper-Bot is finished.

#### Robo Kids NO. I Part list



CPU Block x 1







Infrared Sensor Block x 3

Touch Sensor Block x 3



Buzzer Block x 1







DC Motor(Cross) x 2



Wheel Ø50 x 1  $\,$ 





Support Block x 1



LED Block x 2





Main Block x 4



Flat 2x4 Block x 1

Wheel Block x 2









1x2 Block x 4, 1x4 Block x 4 1x6 Block x 2, 1x8 Block x 4 1x12 Block x 2 1x12 Block x 2 1x2 Block x 4 1x2 Block x 4, 1x4 Block x 4 1x5 Block x 4 1x7 Block x 4 1x7

2x8 Block x 15





1x2 Block(hole) x 2 1x4 Block(hole) x 4

1x6 Block(hole) x 2

1x10 Block(hole) x 2



Wheel Axle x 2

Connection Axle x 5

200mm Cable x 5 450mm Cable x 3



FunnyCard x 64