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LEGO DIGITAL DESIGN SOFTWARE

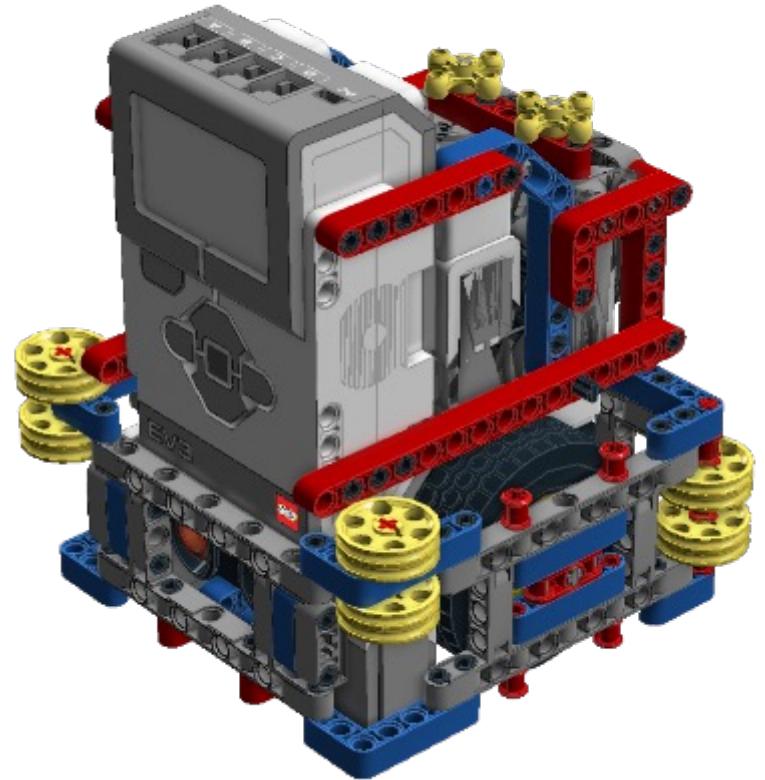
SESHAN BROTHERS

## NOTE: LDD IS NO LONGER SUPPORTED

- LEGO DIGITAL DESIGNER website was shut down in January 2022.
- It is replaced by Bricklink Studio (<https://www.bricklink.com/v2/build/studio.page>)
- If you already have it installed on your computer, you can use the tips in this lesson and open .lxf files on the FLLTutorials site
- <https://jaysbrickblog.com/news/lego-digital-designer-ldd-will-be-shut-down-end-january-replaced-by-bricklink-studio/>

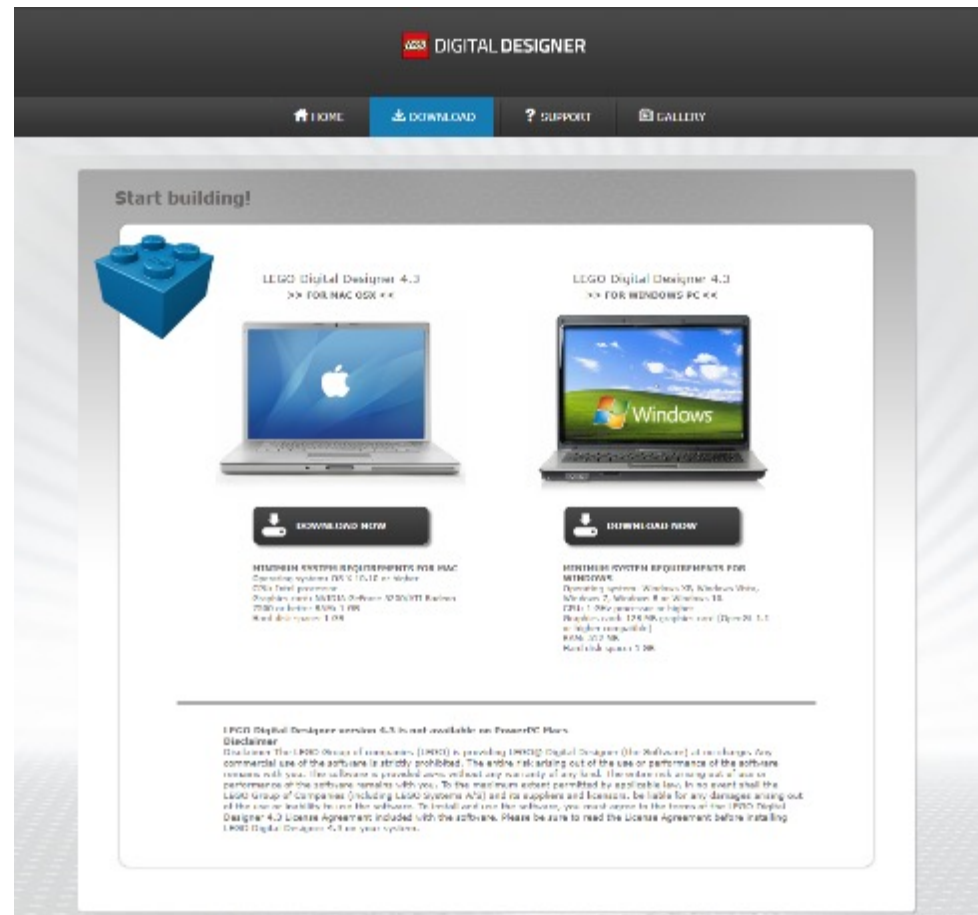
# WHY USE LEGO CAD SOFTWARE?

- An easy way to share your designs with team members
- Can help you document your designs for your Robot Game judging
- Can help you create a duplicate of your robot or make repairs if your robot is damaged
- Can be used to upload your design into some virtual robotics environments that are available from third-party providers



# LEGO DIGITAL DESIGNER

- There are many tools available for creating LEGO designs
- LEGO Digital Designer (LDD) is frequently used by teams and is free to download
  - Link: <http://ldd.lego.com/en-us/download>
- You can download and view .lxf files shared on FLLTutorials.com and EV3Lessons.com and open them using this software



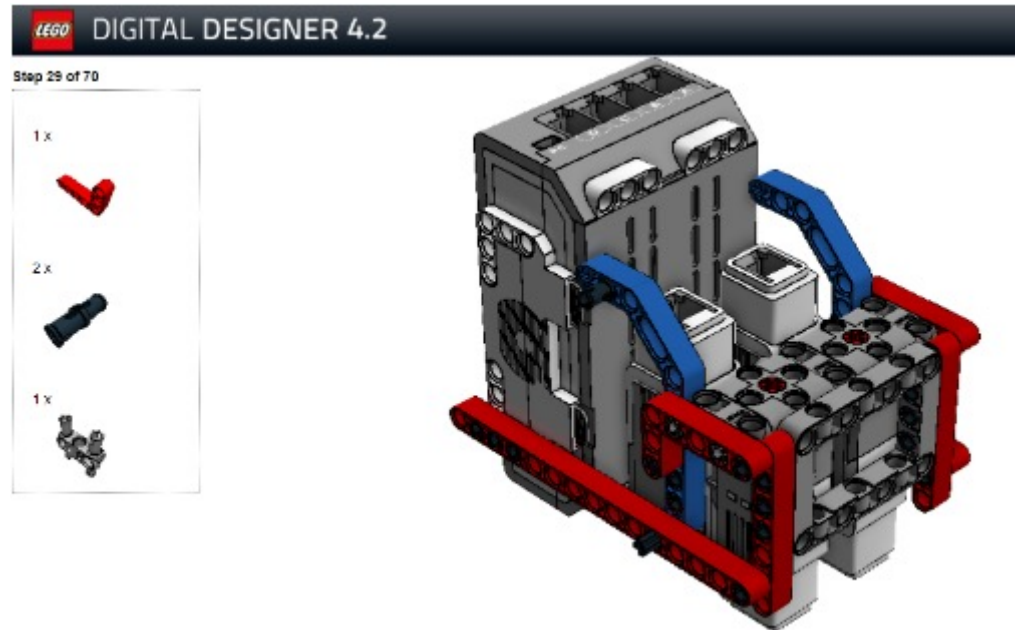
# GENERATING HTML BUILDING GUIDE FROM .LXF FILES



- Select Building Guide Mode Icon on the far right



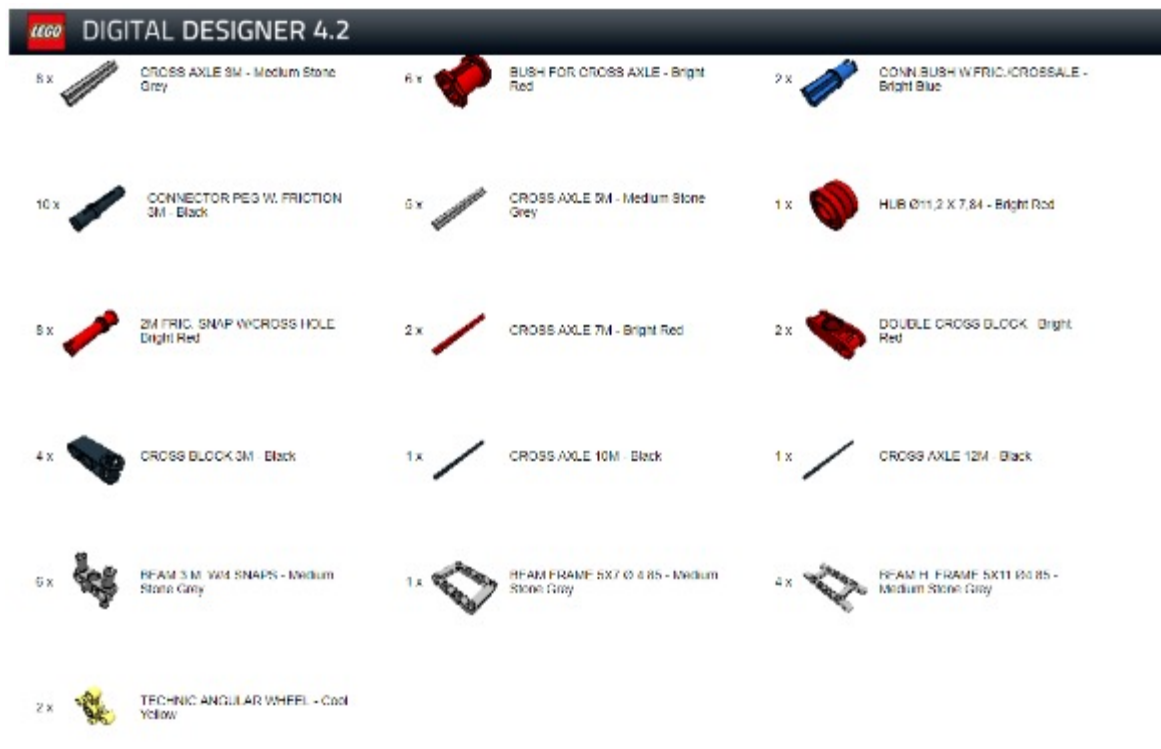
- Select the HTML Icon Guide on the far left
- Follow the rest of the onscreen instructions



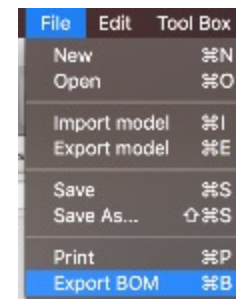
*Note: Building Instructions created by LEGO Digital Designer often don't make sense and cannot be customized*

# GENERATING A PARTS LIST

- The last page of the build instructions (HTML Building Guide mode) has a parts list



Alternatively, you can select Export BOM (Bill of Materials) from the menu

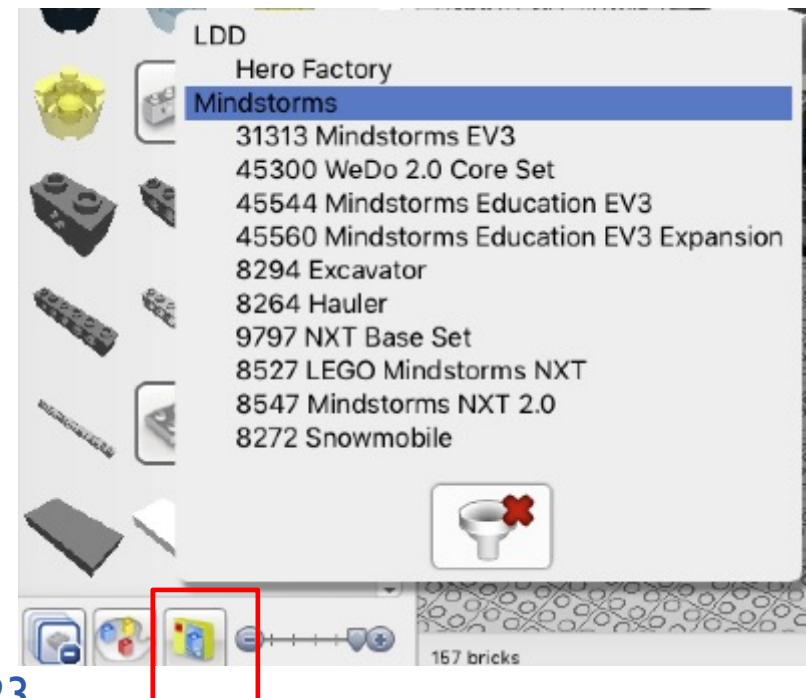
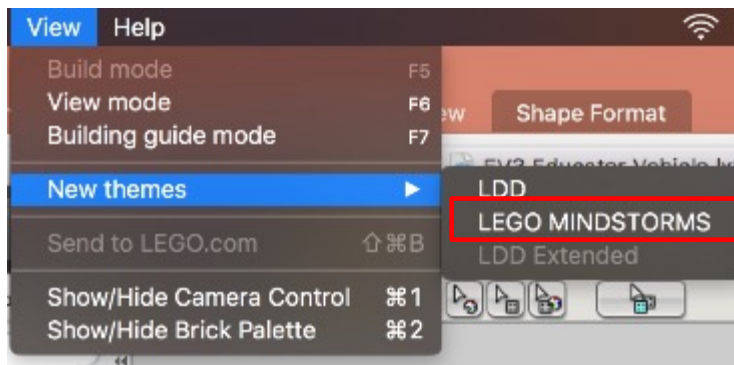


# USING LDD TO CREATE MINDSTORMS DESIGNS

TIP #1: Filtering will help you find MINDSTORMS-related parts quickly

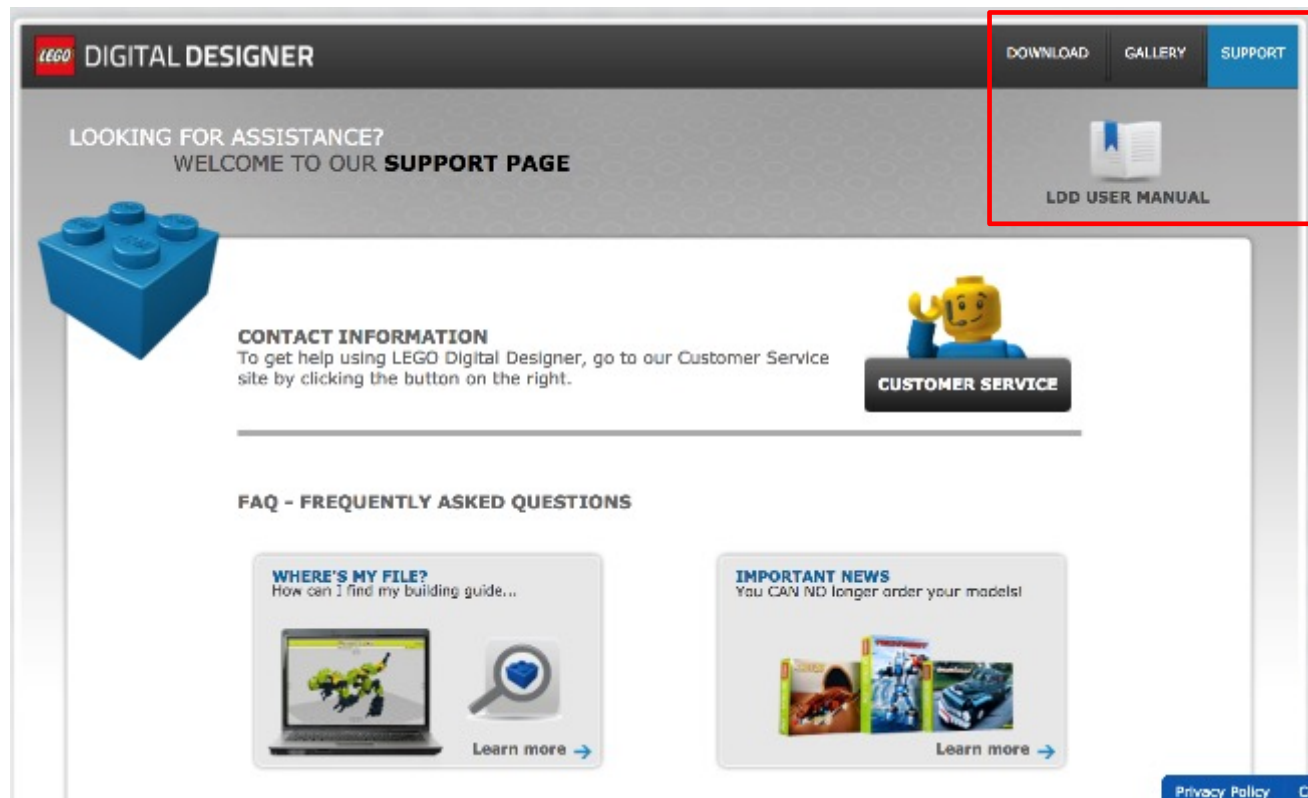
- Step 1: File → View → New Themes Select MINDSTORMS

Step 2: Bottom Left corner: Select “Filter Bricks by Boxes” and then select which MINDSTORMS kit you want to use.



# USING LDD TO CREATE MINDSTORMS DESIGNS

TIP #2: Read the Support Manual which can be downloaded at <http://ldd.lego.com/en-us/support>



The screenshot shows the LEGO Digital Designer (LDD) support page. At the top, there is a navigation bar with the LEGO logo and the text "DIGITAL DESIGNER". To the right of this bar are three buttons: "DOWNLOAD", "GALLERY", and "SUPPORT". The "SUPPORT" button is highlighted in blue. Below the navigation bar, the main content area has a grey header with the text "LOOKING FOR ASSISTANCE? WELCOME TO OUR **SUPPORT PAGE**". To the right of this header is a red-bordered box containing a document icon and the text "LDD USER MANUAL". Below the header, there is a blue LEGO brick icon on the left and a yellow LEGO minifigure icon on the right. The minifigure icon is positioned above a black button with the text "CUSTOMER SERVICE". Below the minifigure icon, there is a section titled "CONTACT INFORMATION" with the text "To get help using LEGO Digital Designer, go to our Customer Service site by clicking the button on the right." Below this section, there is a section titled "FAQ - FREQUENTLY ASKED QUESTIONS". This section contains two cards. The first card is titled "WHERE'S MY FILE?" and has the text "How can I find my building guide...". It features an image of a laptop displaying a 3D model and a magnifying glass icon. Below the image is a "Learn more" link with a right-pointing arrow. The second card is titled "IMPORTANT NEWS" and has the text "You CAN NO longer order your models!". It features an image of three LEGO product boxes. Below the image is a "Learn more" link with a right-pointing arrow. At the bottom right of the page, there is a blue button with the text "Privacy Policy" and a "Co" link.



# LOTS MORE TIPS & TRICKS

- Virtual Robotics Toolkit Introduction to LDD Videos:
  - [https://youtu.be/F0bunR-iBHU?list=PLH3wHnw9bI70XP7HkZ6wc-FNI\\_7kxZOyo](https://youtu.be/F0bunR-iBHU?list=PLH3wHnw9bI70XP7HkZ6wc-FNI_7kxZOyo)
  - [https://youtu.be/-laTwfQXmY0?list=PLH3wHnw9bI70XP7HkZ6wc-FNI\\_7kxZOyo](https://youtu.be/-laTwfQXmY0?list=PLH3wHnw9bI70XP7HkZ6wc-FNI_7kxZOyo)
- Isaac Lloyd Tips & Tricks Videos:
  - <https://youtu.be/X4c7Q0W4cDI>
  - <https://youtu.be/p-UBj76eEGA>

# LIMITATIONS WITH LDD

- Build instructions generated by the software often seem out-of-order and do not make sense
- Build instructions cannot be customized
- Sometimes builds you may have created in the real world are not permitted in the LDD environment as they are technically stressing the LEGO elements
- Pneumatic hoses, rubber bands, and some other elements often cannot be connected and placed correctly

## OTHER LEGO CAD SOFTWARE

- LDCad: <http://www.melkert.net/LDCad>
  - MLCAD: <http://mlcad.lm-software.com/>
  - LeoCAD: <http://www.leocad.org/trac>
- All these above use the LDRAW building system

# CREDITS

- This tutorial was created by Sanjay Seshan and Arvind Seshan
- More lessons at [www.ev3lessons.com](http://www.ev3lessons.com) and [www.flltutorials.com](http://www.flltutorials.com)



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