

FIRST® **LEGO**® *League*

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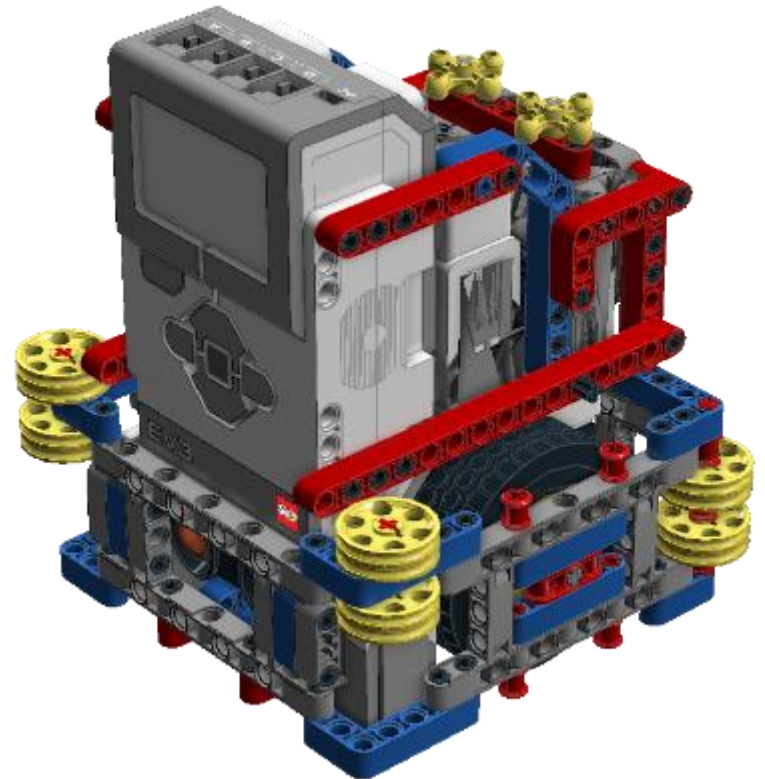
learn

LEGO CAD SOFTWARE

SESHAN BROTHERS

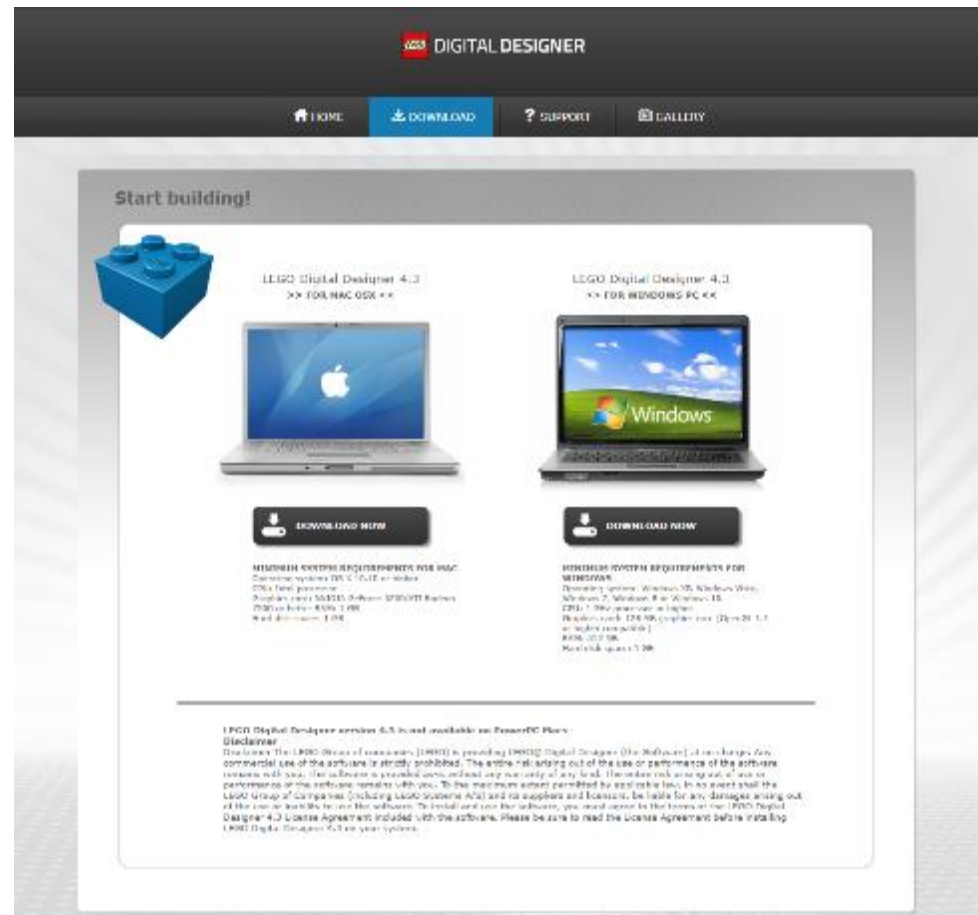
WHY USE LEGO CAD SOFTWARE?

- 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 you 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



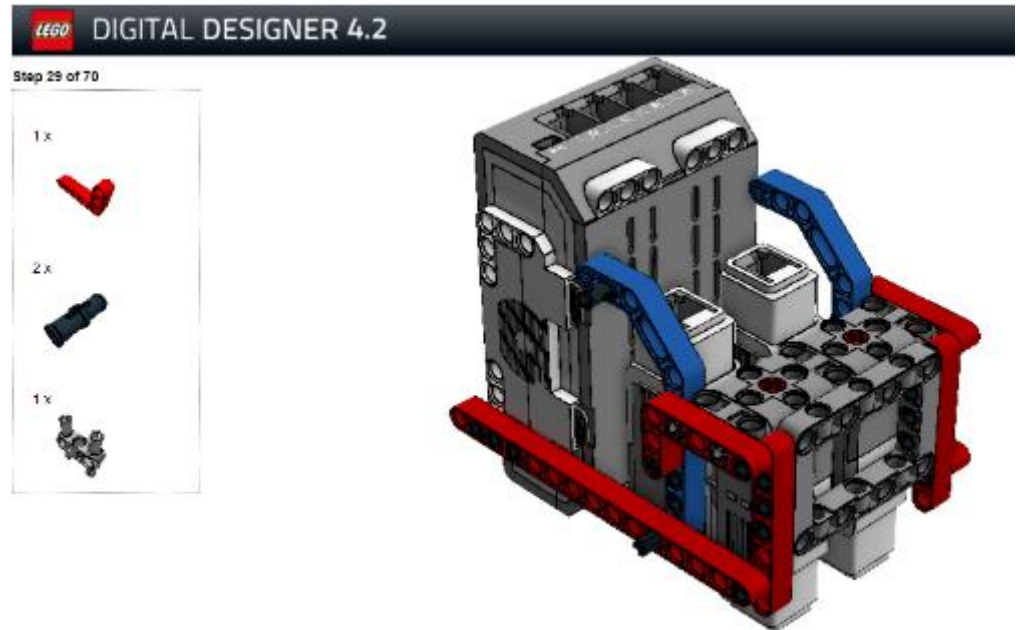
GENERATING HTML BUILDING GUIDE FROM .LXF FILES



- Select Building Guide Mode Icon on the far right



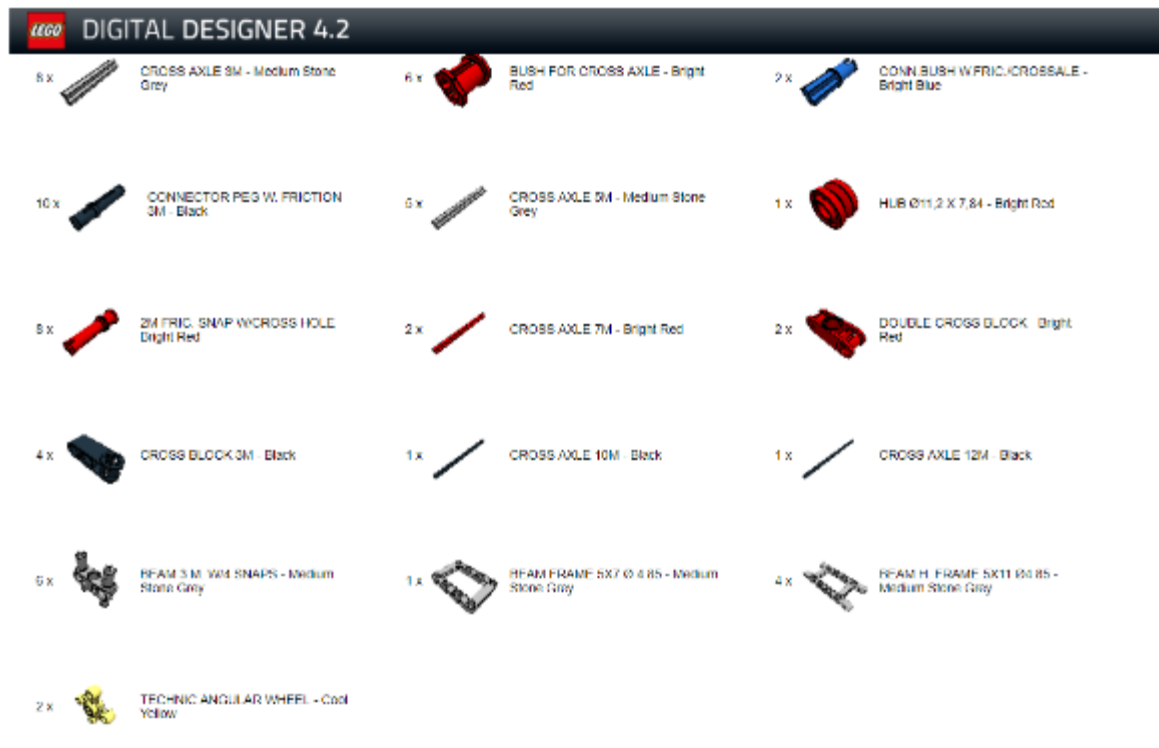
- Select the HTML Icon Guide on the far left
- Follow the rest of the onscreen instructions



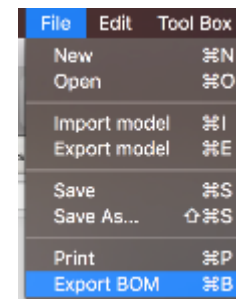
Note: Building Instructions created by LEGO Digital Designer often don't make sense and cannot be customized

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

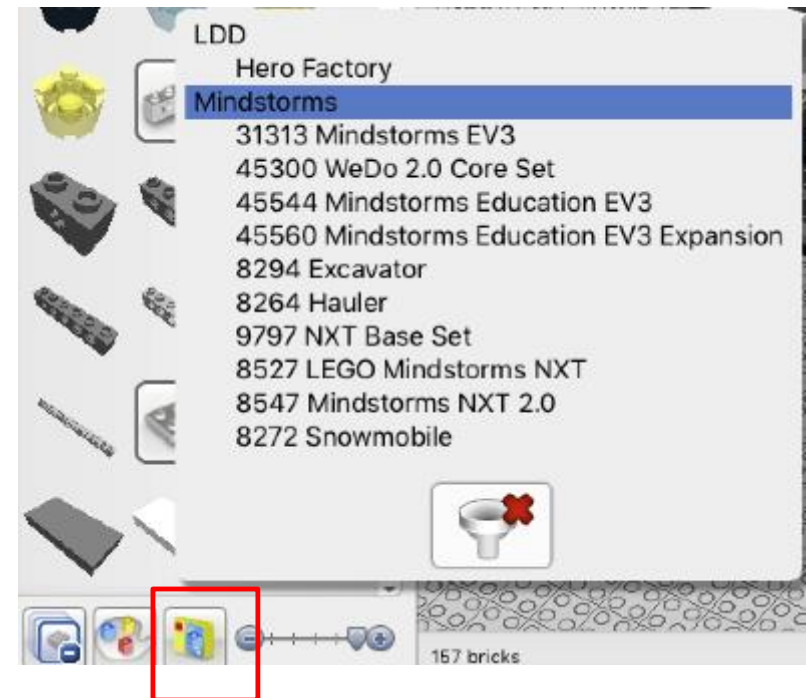
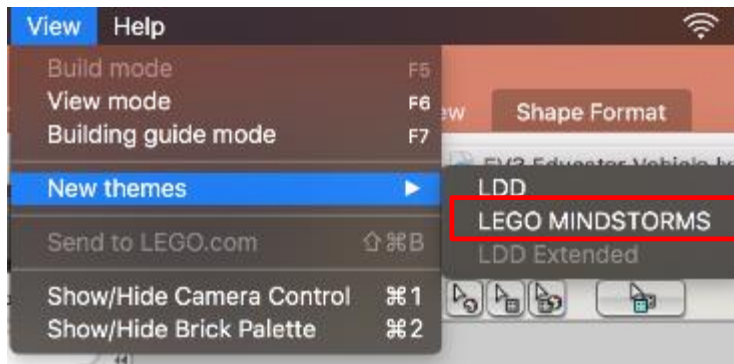


USING LDD TO CREATE MINDSTORMS DESIGNS

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>

LEGO DIGITAL DESIGNER

DOWNLOAD GALLERY **SUPPORT**

LOOKING FOR ASSISTANCE?
WELCOME TO OUR **SUPPORT PAGE**

LDD USER MANUAL

CONTACT INFORMATION
To get help using LEGO Digital Designer, go to our Customer Service site by clicking the button on the right.

CUSTOMER SERVICE

FAQ - FREQUENTLY ASKED QUESTIONS

WHERE'S MY FILE?
How can I find my building guide...

IMPORTANT NEWS
You CAN NO longer order your model!

Learn more →

Learn more →

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LOTS MORE TIPS & TRICKS

- Virtual Robotics Toolkit Introduction to LDD Videos:
 - https://youtu.be/F0bunR-iBHU?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 and www.flltutorials.com



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