Steps for 2Drafting and Modifying toolbar

1. Open FreeCAD and open new document by: Ctrl + N or File > New.

Note: Do not open more than one document for this tutorial.

1. Change workbench to BIM by View>Workbenchs>BIM or press W,2 or select BIM from drop down combo box in the top most toolbar. You will observe that BIM toolbars are added.

Note: BIM workbench must be installed before from Tools>Addon Manager from internet.

1. Click inside document. To zoom in or out to adjust gridlines, use double finger swap on mousepad or use mouse wheel or View>Zoom>Zoom in /Zoom out or use Ctrl + or Ctrl -. To fit the whole content, press V, F or its icon. To fit the selected content, press V, S or its icon.

Note: You can change navigation style from status bar. For this tutorial select CAD navigation style.

1. Open report view from View>Panels>Report View or use toggle button on bottom right. It tells what to do with given next for given command or give some info.
2. To draw line, click on line icon from 2D drafting toolbar or 2D Drafting > Line or press l, i or use click on line from Task tab on combo view. Click or enter coordinates to draw line.

Note:

1. You can change the keyboard shortcut of every command in case if you think more time is consumed by pressing two keys. 😊
2. Hold shift key for ortho snap to draw horizontal or vertical line.
3. You can change length of a line by selecting it, then, go to combo view>Property Window>Data Tab. Under heading of Draft, change length.
4. You can also change start or end point. You can change the angle with base from Placement>angle under the base heading in property window. Better way is start a line command, click to fix first point and then fix angle from task view.
5. You can control many options from right click context menu.
6. The drawn line is can be based on delta x and delta y. For this option, check relative checkbox.
7. To draw multi point line, use DWire from icon or 2D Drafting>DWire or press W, i

Note:

1. You can change draw style to dotted line from view tab of property window in draw style property. You can also change line width, line size, point size and color.
2. You can select multiple lines or object by pressing control key and selecting them or using box selection from Edit>Box Selection (shift B) or by clicking on objects while holding down control or shift key.
3. To draw circle from two points, click on circle icon or 2D Drafting>Circle, or press C,i.

Note:

1. To smooth circle, go to Edit>Preferences>Part Design>Shape View Tab and reduce the values then draw.
2. Go to Edit>Preferences>Display and select antialiasing type.
3. To Draw Rectangle, click on rectangle icon, or 2D Drafting>Rectangle or press R,E. Pick or enter first point, then second point.

Note:

1. For keyboard entry, do not forget to type along with units e.g.,5cm.
2. Again like line, next point of rectangle can also be either relative (delta x and delta y) or absolute value.
3. For Offset, click on Draft Offset or Modify>Offset or press O,S.

Note:

1. To specify exact length of offset, zoom in after selecting offset object, then move mouse for exact offset distance. Or use draft work bench with this command.
2. To make a copy of offset instead of move, check copy checkbox from task view. Shortcut for copy offset is letter o.
3. To enter offset by keyboard only, first write o,s then select the rectangle or object then either move mouse in or out of that object to specify position vector direction then write offset distance along with unit. e.g., 15cm. Then, write the letter o after the unit for checking copy and then backspace to remove o and then enter.
4. To change the fill, select the filled object. Go to Property Window>Data Tab, under heading of Draft, change Make Face property to false.
5. To prevent making fill by default, go to Edit>Preferences>Draft>General setting tab and uncheck the checkbox of Fill object with faces whenever possible.
6. For Moving object, click on Move icon on modifying toolbar or Modify>Move or press M, V. Select the object and click on the point and then target point to move.

Note:

1. To change/add keyboard shortcut, go to Tools>Customize>Keyboard tab, select draft from dropdown combobox and select Move from pan below. Change its keyboard shortcut letter.
2. To change gridlines and spacing, go to Edit>Preferences>Draft then select the tab of Grid and spacing and change main line every, grid spacing (in mm always irrespective of units) and grid lines.
3. Gridlines are updated when you start a new command e.g., line command.
4. Keep gridline simple and preferably of big unit (e.g., 10 ft for inch/ft for house drafting). In case if you need precise location of certain point in drafting, use construction lines. Construction lines are explained in lecture of Working with Draft workbench.
5. To change unit, go to Edit>Preferences>General and then select units tab.
6. You can also use move copy command.