Illustrator

Whilst Photoshop is about manipulating pixels (photographs), Illustrator is about creating and editing vectors (shapes like logos and diagrams).
A vector diagram has infinite resolution because the shapes are mathematically defined.

Creating shapes

Open Illustrator. Go » Illustrator » Preferences » Units, and make sure that "General" is set to "mm".
Create a new Print A4 landscape document — by now you are easily able to do this!
So that we are on the same space, go » Windows » Workspace » Layout
Note that the tools, panels etc. are essentially the same as in Photoshop and InDesign.

Then…

1. Create a circle of diameter 100mm (hold down the rectangle tool until you see the circle).
    If you cannot see the width and height dimension, click "Transform" from the top bar.
    Create a rectangle 50mm x 100mm (you can press D for the default fill and contour colours).
2. Arrange approximately as in the top right diagram — you might want to select both objects and use the Horizontal Align Centre button at the top.
3. **Move an anchor point**: Click on the Direct Selection Tool (second tool) or press A , then click on the bottom left corner of the rectangle; in the "X window" at the top add "-10" by typing this after the value Do the same bottom right with "+10". You have moved the bottom corners outwards.
4. **Make a corner rounded**: Select the trapeze-shaped object with the Selection Tool V . Then, once selected, click on the Direct Selection Tool A , and see the little circles on the inside corners.
    Drag one of the little circles inwards — note that the corners become rounded. Undo the rounded corners ⌘Z .
    Double click on the bottom left corner circle. Define radius at 4mm. Do same on right.
    (If you filled the shape with dark grey, you have made a keyhole — but do not do this right now.)
5. **Separate elements**: Select both objects using the Selection Tool, then from the Pathfinder panel click on the Divide icon; then ungroup (right click then Ungroup or » Object » Ungroup or ⇧⌘G).
    Click on each of the three elements to confirm to yourself that they have been separated.
6. **Combine elements**: To recombine the two lower elements (the trapezium), select both the bottom two elements (i.e. not the circle), and then from the Pathfinder panel click on the Unite icon, and the trapezium is reunited.
    Separate the two shapes as shown here, just to confirm to yourself that they are separated.
7. **Note**: combining or separating or subtracting objects can be done "more efficiently" with the Shape Builder tool, but this is not intuitive so it is better to use Pathfinder elements unless you do this often.
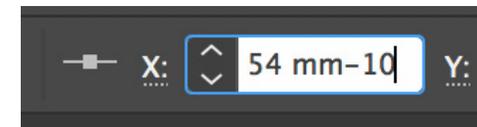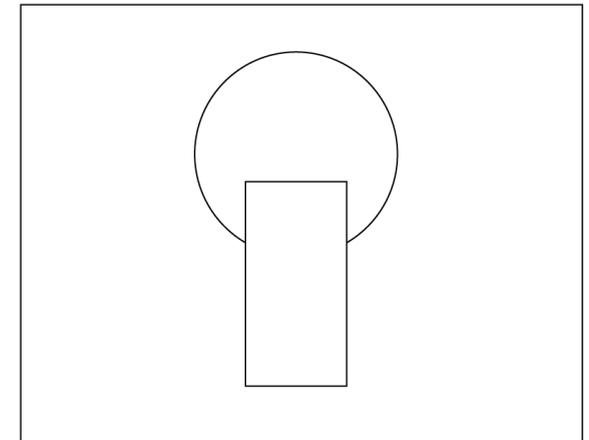
The "X window"
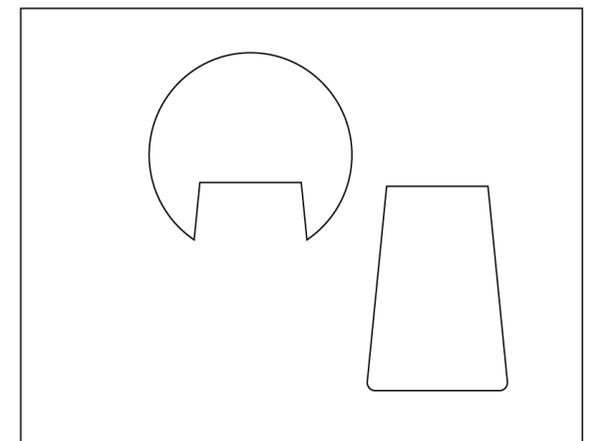
Editing texts, and more shapes

1. Delete all shapes so that you have a clean A4 landscape workspace.
2. Fill about half the width with the word "Hello!", using a thick sans-serif font like Lato Black (use the Type Tool T most obviously). Make the text blue.
3. Select the text and convert to vectors by going » Type » Create Outlines.
4. Right-click and go "Ungroup", and each letter is a separate shape.
5. Select all, and press D for default fill and outline (white and black).
6. Select just the "H", and move the cursor to just outside of the corner of the "H" until you see a curved arrow, and then rotate the "H" slightly.
7. With the "H" selected, press the Direct Selection Tool, and drag one of the small inside corner circles slightly inward — and the corners become curved.
8. With the Direct Selection Tool still selected, hold down shift and click on each of the four top corners of the two "Ls"; drag these corners a little upwards to elongate these characters.
9. Have each character filled with a different shade of green or blue.
10. Note that the exclamation mark is considered one object. To separate the dot at the bottom, select the exclamation mark, right click, and go Release Compound Path. So make the dot red.
11. Select all, and remove the outline — i.e. make the stroke transparent.
12. Create an orange rectangle (with the rectangle tool obviously) to cover all the writing.
13. Move the rectangle to the back by selecting it, then go » Object » Arrange » Sent to Back.
14. Let's make the rectangle into a speech box: Click on the Add Anchor Point Tool "+" (this looks like a pen with the plus), and mark three points quite close together along the bottom of the rectangle near the right corner. Choose the Direct Selection Tool and drag the middle point downwards and under the first point.
15. If you want the vertical part of the speech mark to be perfectly vertical: with the Direct Selection Tool, select the left corner and the bottom of the speech mark, and click on the appropriate align icon at the top.
16. Lastly, lets subtract the dot in the exclamation mark (i.e. make a hole): select just the speech box and the exclamation dot; choose the Shape Builder Tool, and while holding down the alt key click just on the dot.
    (Or, more intuitively, you could instead subtract the dot using Divide from the Pathfinder panel; then Ungroup then delete the dot. I never use the Shape Builder Tool!)
17. To verify that this is a hole and not the colour white, create a large rectangle of a different colour (to the speech box), move it to the back, and drag beneath. Check. Then delete.
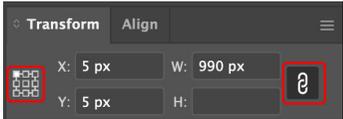18. Make all the characters white.
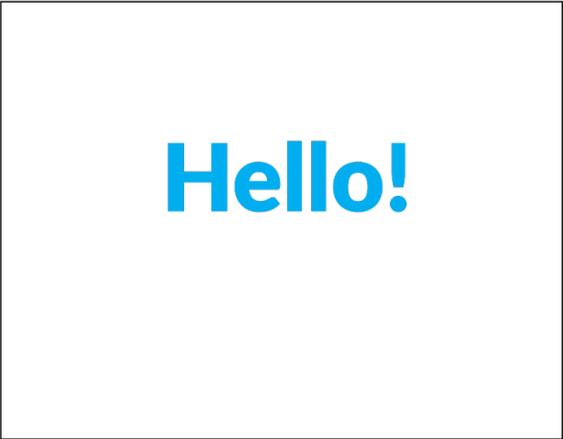
Make a Facebook logo look orange and pregnant

1. Delete all shapes so that you have a clean A4 landscape workspace.
2. Download the resources from `iscom.millner.fr/down/Illustrator.zip`
3. Go » File » Place… and place the facebook-logo.png image on one side of the page.
4. Let's convert this image file to a vector graphic: select the logo and
   go » Object » Image Trace » Make and Expand, and the image file has been vectorised!
   (If you want more control, you can use the Image Trace panel instead.)
5. But unbeknown, some unwanted "noise" is sometimes included, so here is a trick
   — with the image selected go » Object » Ungroup, (or right-click and Ungroup)
   — then with selection tool marked, click once outside the image then again re-select
   — drag the image to the other half of the page
   — go » Select » All or ⌘A , and then delete the outlines that were left behind.
6. Change the fill colour from black to dark-orange.
7. Select image and, using the Pen Tool (not the Add Anchor Point Tool), add
   a point by clicking at the arrow-point as shown in the image above-right.
8. With the Direct Selection Tool, drag this point outwards (right) so that the images looks like the
   one bottom-right. Adjust the tangent points (handles) to widen the circular arc.
   If (and only if) you see no handles, then select the Anchor Point Tool (underneath), click on the
   point, and drag downwards.

So let's export this in various sizes, with a small rim

9. Without closing the existing document, create a new Illustrator document:
   — "Web" 1000x1000 pixels.
10. Copy paste the image to this new document.
11. Make (from top left corner) X=5px, Y=5px, W=990px
    and note the required settings in the Transform panel shown here
12. To export, go » File » Export » Save For Web (legacy)…
    (Do not worry that this is "legacy" — it's still a really good method.)
    — use setting "PNG24" and have "Clip to Artboard" marked
    — click "Save", etc., and have a look at the result.
13. Re-export this file, but this time set the image width to 120px.
    Here we are pretending that 120x120px is the required size for a social media website.
14. Then please delete these pregnant Facebook images, because I do not want to encourage you to
   mess with logos — this is intended just as a learning exercise :-)

Some odds and ends

Pathfinder Panel (already some revision)

The Pathfinder panel lets one do a lot with two or several elements.

– Create three circles and arrange them as per the top diagram left.

– Open the Pathfinder panel: there is a vertical strip of icons to the
left of the panels, and you find the Pathfinder icon here: click on it.
(If you cannot find this panel, go » Window » Pathfinder)

– Select all three circles, from the Pathfinder panel, click "Divide".

– Ungroup, and fill some segments with a different colour, as per the top diagram right.

– Next, create two circles as per the arrangement here left; Select both circles.

– From the Pathfinder Panel, press Minus Front, and you get the result shown on the right.

– Etc. Explore this panel.
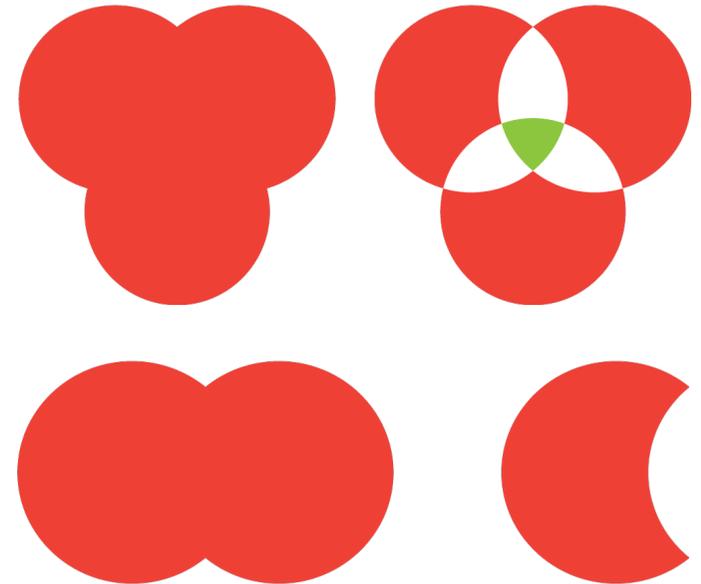
Pen Tool

Get used to the Pen Tool, which is useful in all of Illustrator, Photoshop and InDesign.

This tool needs practice!

– I have shown you how to use this in class earlier.

– This is a good video: `www.youtube.com/watch?v=h7Yiy7sYHsY` (4'36").

– This is a good video, and maybe watch just the first half:
`www.youtube.com/watch?v=LsppEZJ7DYY` (9'26").

– Note that
  – not all shapes work with just horizontal and vertical handles as suggested in the second
    video above
  – to have a guide, view the Ruler (» View » Ruler), and drag down or across from the ruler
  – to interrupt the pen tracing process, press Escape
  – to resume, place the pen exactly at the end point
  – to move (drag) an anchor point or a tangent (guide) handle,
    use the Direct Selection Tool.

Exercises

1. Pen Tool tracing
– Sketch a "lob-sided" (one side bigger than the other) heart shape on
   a piece of paper.
– Photograph this heart with your smart-phone or computer camera
   (on a MacBook you can use the Photo Booth application to photograph).
– Place this photo as a layer in Illustrator.
– Created a layer above, and trace the heart using the Pen Tool.
– The rest should be obvious: recreate what you see on the right.

2. Your own design
Design a logo for a brand named "Hello +", a new social networking portal.
The logo should be significantly typographic in its design.
When you are done, I invite you to put up your hand and show it to me.

Output the result as
1.   a PDF
2.   PNG with width 2000px — and keep this because you will be using it in your next lesson.
3.   PNG with width 820px by 312px for use on a social media website
       (to do this you could create a new Illustrator document with these pixel dimensions,
       and copy-paste your design into it).

Create a square version of your logo, for use as a thumbnail, and export it as a PNG
of 160px by 160px.

Homework (or exercise)

Pen Tool in Photoshop

Open the file beer-image.jpg in Photoshop.

(Often one is faced with having to work with "sub-optimal" images. This image is a little burned at the edges.)

Cut out the beer bottle by using the Pen Tool. This is how you do it:
– Enlarge the image in your work-area so that you can see only about half the beer bottle.
– Using the Pen Tool, trace the outline of the bottle as accurately as you can.
– One you have closed the outline (once you are back to where you started), you then need to convert the outline into a selection...
  – open the Paths panel (which is in the same group as the Layers panel)
  – click on the panel option, which is on the top right of the panel group (as shown in the diagram here)
  – in the drop-down menu, click Make Selection, and have a Feather Radius of 1. (You could also save the selected path if you wanted to.)
  – Now your path is selected, which means that the beer bottle is selected.
  – So go » Select » Inverse to select everything except the bottle.
  – And then you can do whatever it is you might want to do next, like remove the background.
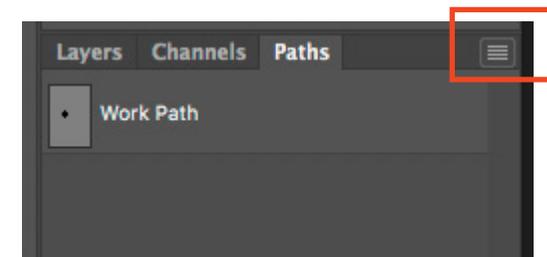
If you are finished and it is still lesson time

...then either
– explore Photoshop or Illustrator on your own
– or ask me for another exercise
– or help somebody else who has not finished — this is a very good thing to do.