

Images and copyright

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Image types – bitmap

Bitmap images divide the image into a grid and save a colour value for each pixel on the grid.



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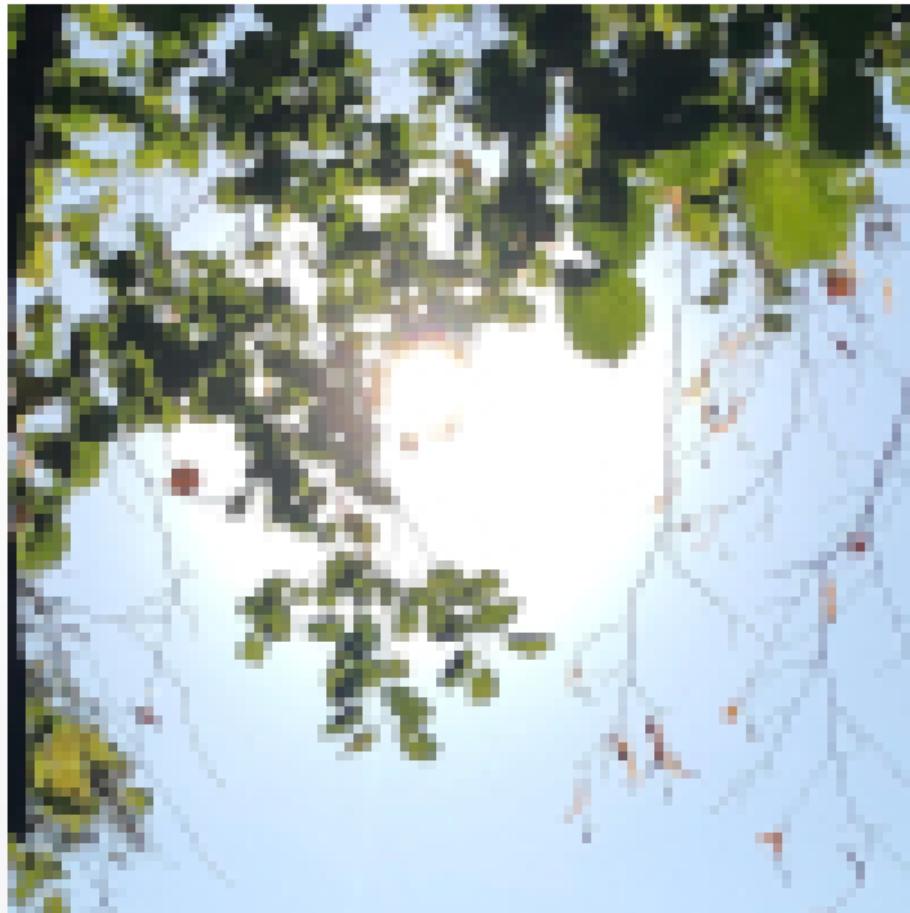
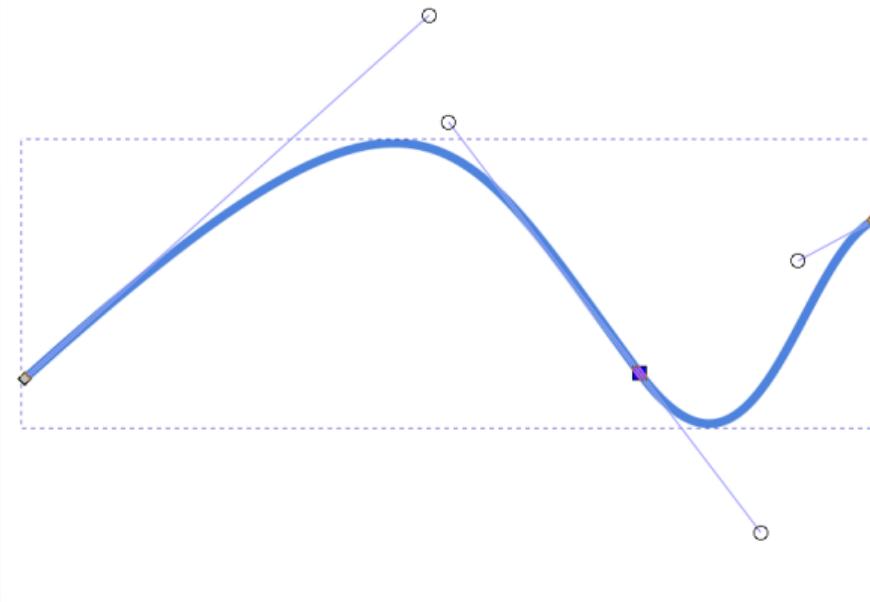


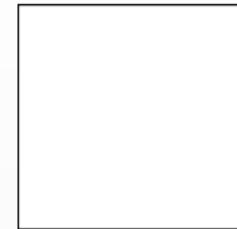
Image types – vector

Vector images store information about the image as geometric shapes and other mathematical information, which is then used to create the image.



Example

The code that creates this square is:



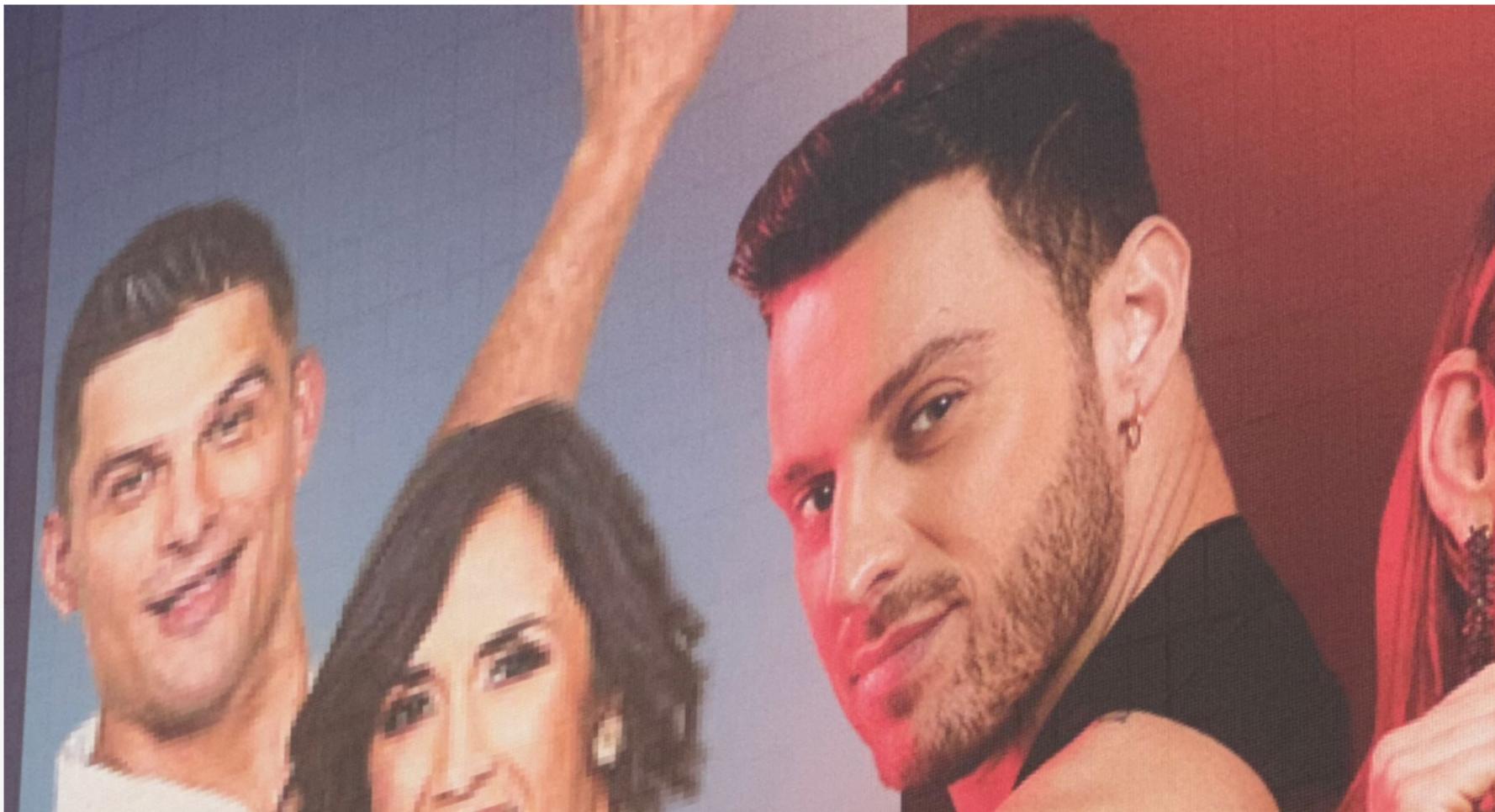
```
<rect  
style="fill:#ffffff;stroke:#000000;stroke-width:1"  
width="75"  
height="75"  
x="0"  
y="0" />
```

Image quality

- ▶ Image quality is measured in dots per inch (dpi) or equivalent.
- ▶ A computer screen displays a lot fewer dots than a printer prints.
- ▶ This can mean that:
 - ▶ a screenshot is likely to look bad when printed in a report;
 - ▶ just because an image looks fine on your screen, doesn't mean it will when printed.







Copyright

- ▶ (I am not a lawyer but...)
- ▶ Copyright protects the person who created something so their work cannot be used without their permission.
- ▶ Unless permission has been given or licensed, or covered by an exception in copyright legislation, only the copyright owner may do certain 'restricted acts'; these include:
 - ▶ copying the work
 - ▶ adapting the work
 - ▶ communicating the work by means of electronic transmission
 - ▶ showing or playing the work in public

Copyright

- ▶ Copyright protection begins when a work is created. It is automatic, registration is not required nor is the © statement necessary.
- ▶ Copyright is generally owned by the creator, but it can be assigned to someone else (a publisher, an employer).
- ▶ The fact that resources are available on the internet does not in itself mean they can be copied and reused.
- ▶ An image may be re-used if it is out of copyright or if the copyright owner has given permission.
- ▶ There are exemptions for academic work if the image is needed to answer a question, provided the work will only be seen by your examiner.

Finding images to use

- ▶ Creative Commons images enable creators to retain copyright while giving rights for the image to be used.
 - ▶ CC BY: you are free to share or adapt provided you give credit to the original creator (attribution).
 - ▶ CC BY-ND: share but not adapt with attribution.
 - ▶ CC BY-SA: share with attribution and adapt provided you share your adapted version under the same terms.
 - ▶ CC BY-NC: CC BY but for non-commercial use only.
 - ▶ CC BY-NC-ND: CC BY-ND but for non-commercial use only.
 - ▶ CC BY-NC-SA: CC BY-SA but for non-commercial use only.
- ▶ Start at Creative Commons search (choose which resource to search).

Finding images to use

- ▶ There are various 'royalty free' image libraries. Some charge, some are free to use.
- ▶ You aren't expected to pay for images in your academic reports, posters and presentations.
- ▶ Here are some royalty free image libraries:
 - ▶ pexels
 - ▶ MorgueFile

Creating your own images

- ▶ The best way to avoid copyright issues is to create images yourself.
- ▶ For simple diagrams, you should create these yourself rather than sourcing them from somewhere else.