

What is a monospaced font?

A monospaced font, also called fixed-pitch, is a font that uses the same width for each character. This sentence is written in a font called Helvetica. It is not monospaced. Look at the i and the o in the words. See how the i takes up less width than the o?

An example of a monospaced font is Courier. In Courier all characters occupy the same width. The i takes the same place as an o.

This sentence is written in Courier. You may not notice it, but the i and o take the same space.

Why is this important?

When writing out alignments, or sequences, we use a monospaced font.

Here is an alignment in Courier:

```
ATTTCGCATT
||| ||| |||
ATTGGCGTT
```

Here is the same alignment in Helvetica (a non-monospaced font):

```
ATTTCGCATT
||| |||
ATTGGCGTT
```

The text and match-markers no longer align

Here is a blast protein alignment in Courier:

```
Query 2 GTAGKVIKCKAAVLWEQKQPFSEIEEVAPPKTKEVRIKILATGICRTDDHVIKGMTVSK 61
G A + IKCKAAVLWEQK PFS+EE EVAP K KEV KILATGIC T++H+ KG +VS
Sbjct 65 GRAEEAIKCKAAVLWEQKNPFSVEETEVAAPSKAKEVCSKILATGICWTNEHMTKGAIVSX 124

Query 62 FPIVIGHEATGIVESIGEGVTTVKPGDKVIPLFLPQVRECNAACRNPAGNLCIRSDITGRG 121
FPV VGHEAT +VESIGEGVT VKPG VI +FLPQ RECNAACR+PDGNLC+ S ITG G
Sbjct 125 FPVTVGHEATWVVEISIGEGVTMVKPGVTVILIFLPQCRECNAACRDPAGNLCV-SSITGHG 183
```

And in Helvetica we get:

```
Query 2 GTAGKVIKCKAAVLWEQKQPFSEIEEVAPPKTKEVRIKILATGICRTDDHVIKGMTVSK 61
G A + IKCKAAVLWEQK PFS+EE EVAP K KEV KILATGIC T++H+ KG +VS
Sbjct 65 GRAEEAIKCKAAVLWEQKNPFSVEETEVAAPSKAKEVCSKILATGICWTNEHMTKGAIVSX 124

Query 62 FPIVIGHEATGIVESIGEGVTTVKPGDKVIPLFLPQVRECNAACRNPAGNLCIRSDITGRG 121
FPV VGHEAT +VESIGEGVT VKPG VI +FLPQ RECNAACR+PDGNLC+ S ITG G
Sbjct 125 FPVTVGHEATWVVEISIGEGVTMVKPGVTVILIFLPQCRECNAACRDPAGNLCV-SSITGHG 183
```

which is meaningless.

So, for sequences and sequence alignments you should always use a monospaced font such as Courier (other monospaced fonts are available: https://en.wikipedia.org/wiki/Samples_of_monospaced_typefaces).