Flowcharting

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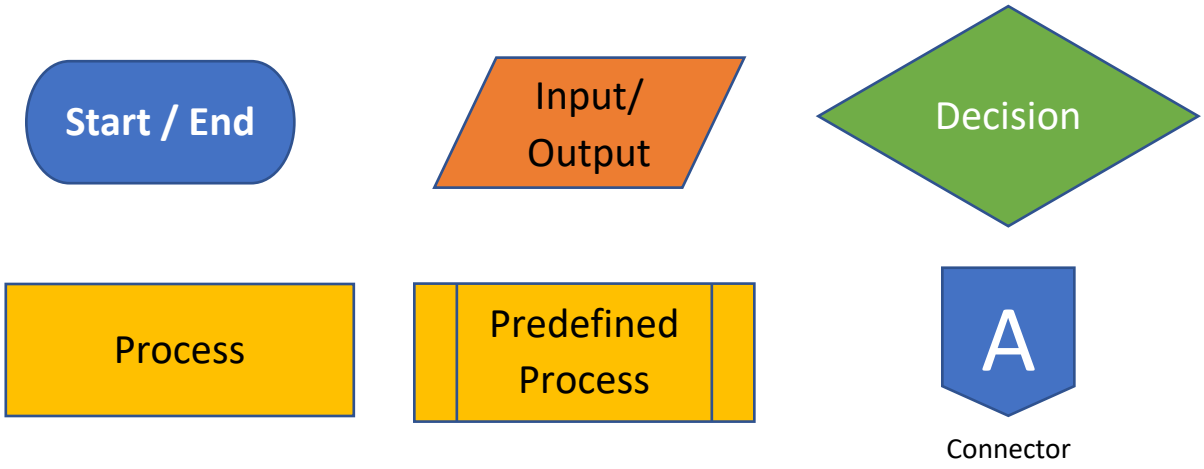
So you want to learn flowcharts? Well, This flowchart tutorial will teach you all you need to know. It will cover the history of flowcharts, flowchart symbols, how to create flowcharts and flowchart best practices.

History of Flowcharts

Frank Gilberth introduced flowcharts in 1921, and they were called “Process Flow Charts” at the beginning. Allan H. Mogensen is credited with training business people on how to use flowcharts. Wikipedia has a great summary of the history of flowcharts, read more in this wiki section.

Flowchart Symbols Meaning

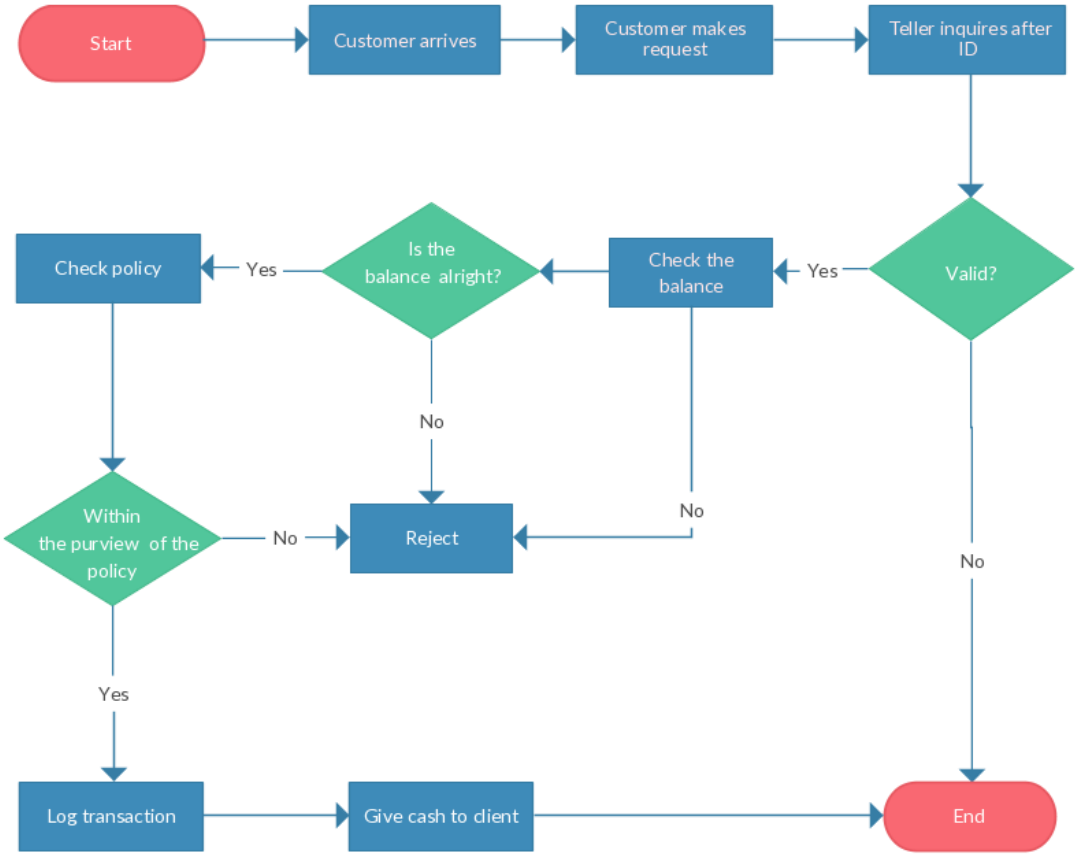


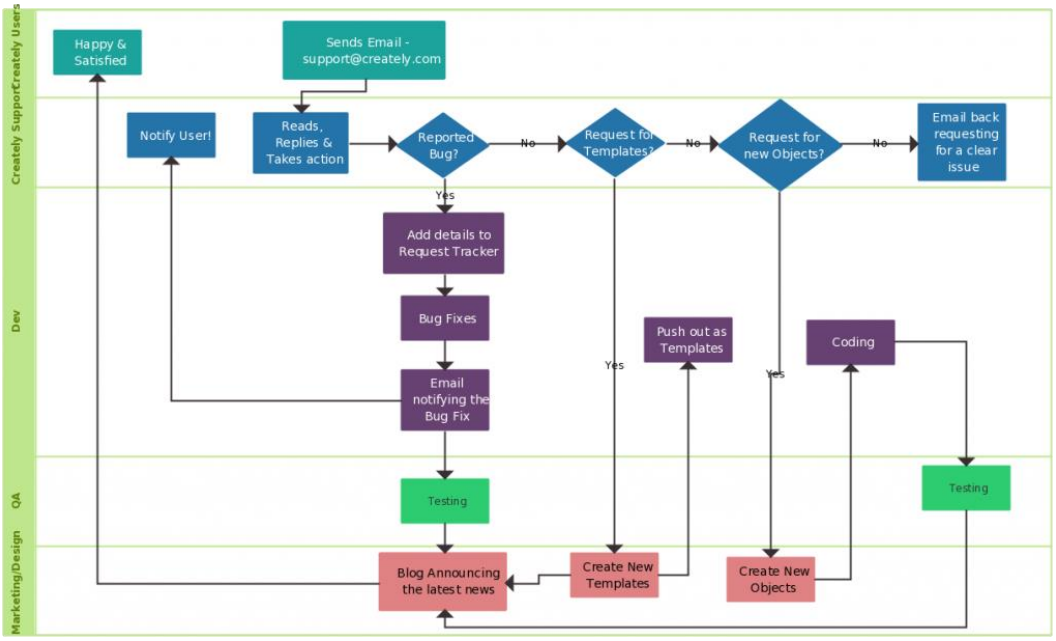
So what are the different symbols used in a flowchart?. Most people are only aware of basic symbols like processes and decision blocks. But there are much more symbols to make your flowchart more meaningful

The most common symbol used in a flowchart is the rectangle. A rectangle represents a process, operation or a task. The next most common symbol is the diamond which is used to represent a decision.

Although these are the standard symbols available in most flowchart software, some people do use different shapes for different meanings. The most common example of this is the using circles to denote start and end. The examples in this flowchart tutorial will stick with the standard symbols.

Flowchart Examples





Flowchart Best Practices

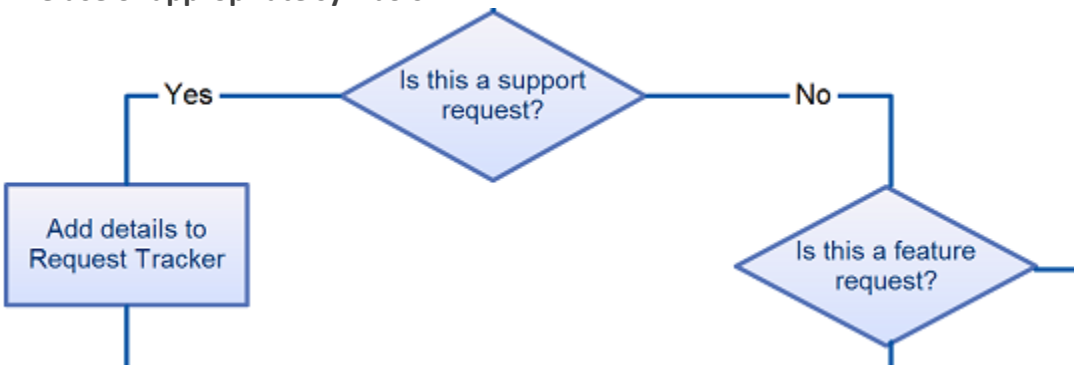
There are few things you can do to make your flowchart universally accepted. And there are some things that you can do to make it visually pleasing to others as well.

If you're planning to share your flowchart or hoping to use it then it's wise to use standard symbols. However, it is important to remember that the idea is to give out information in an easy to understand manner. It is perfectly acceptable to use an alternative symbol as long as the audience understands it.

Keeping the arrow flow to one side, using same size symbols, naming the decision blocks, processes, arrows etc are few things you can do to make it better. The common mistakes section covers most of these practices in detail.

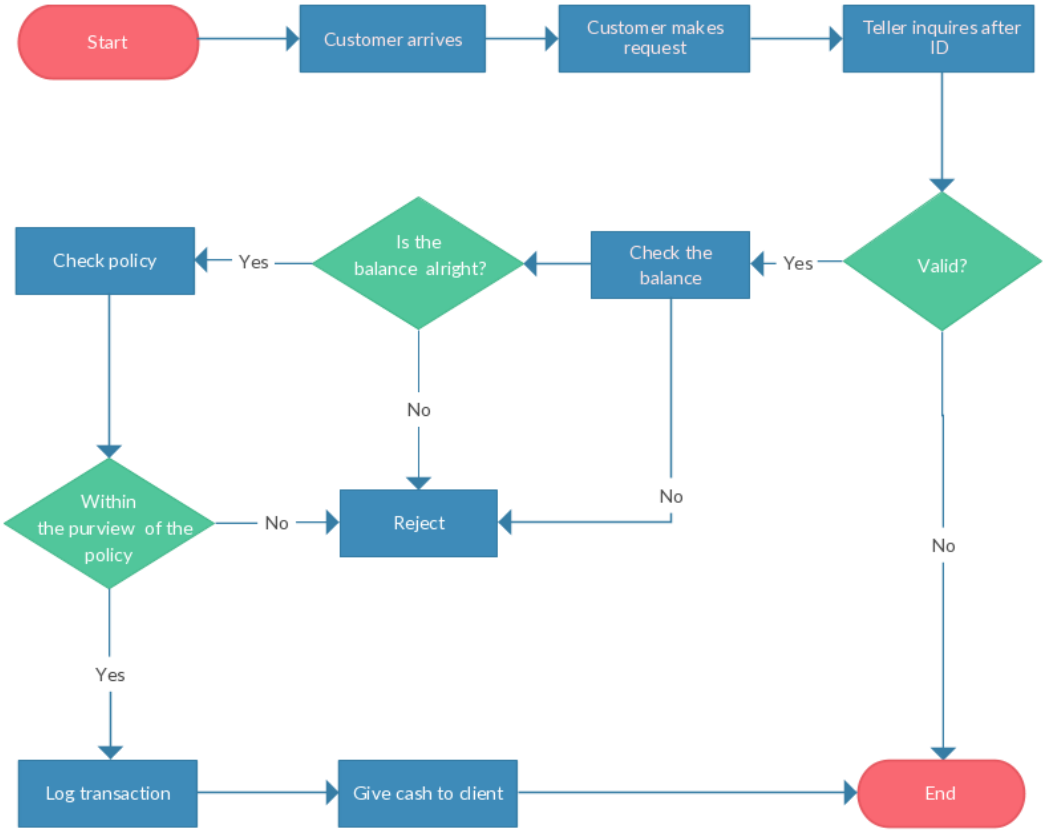
Common Mistakes Made when Drawing Flowcharts

1. The use of appropriate symbols



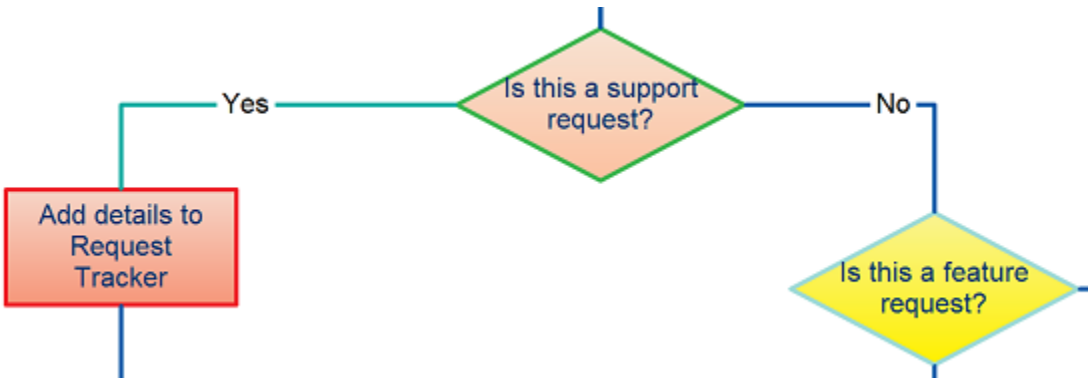
Every symbol has a meaning. While it may seem convenient to use a process symbol for everything, this could end up confusing the reader. To get a better understanding of what symbols are relevant when reading up on what each object is all about.

2. Avoid flow direction that is inconsistent



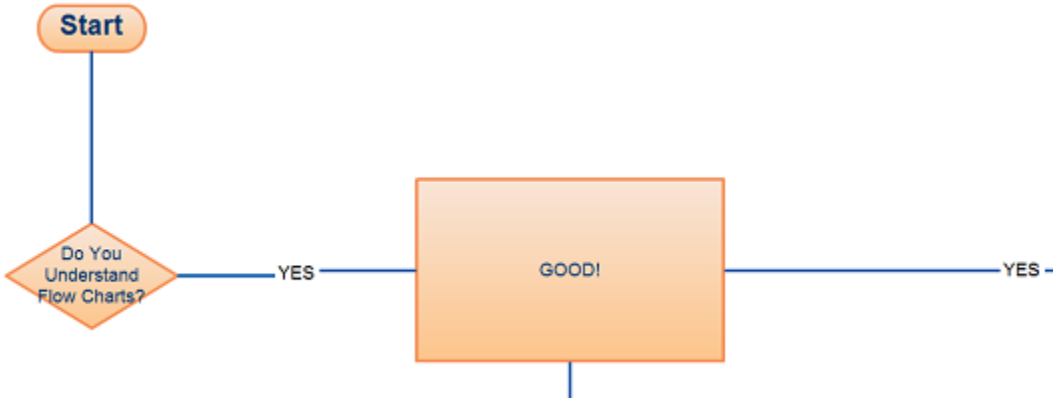
The two most widely accepted flow directions are top to bottom or left to right. Having said that these two types of directions should not be mixed into the same flowchart. Consistency really does matter.

3. Excessive color schemes



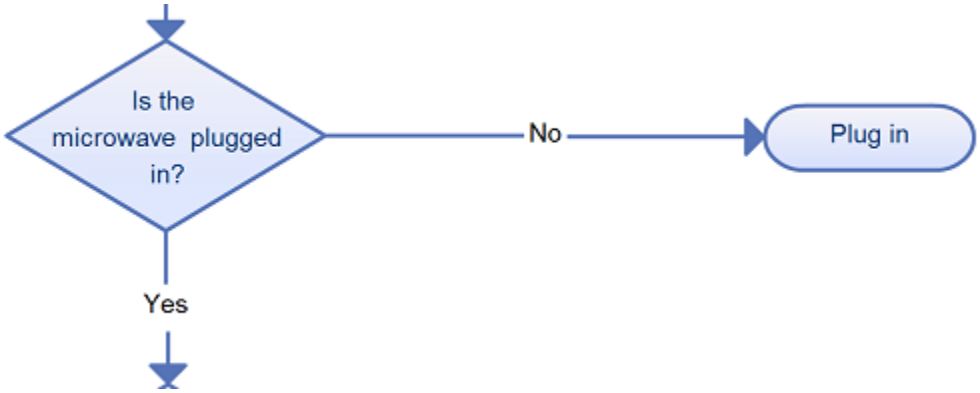
Your flowchart is designed to give a solution to a problem. With this in mind, the last thing you want to do is to have your message lost in visual noise.

4. Symbol sizes should be consistent



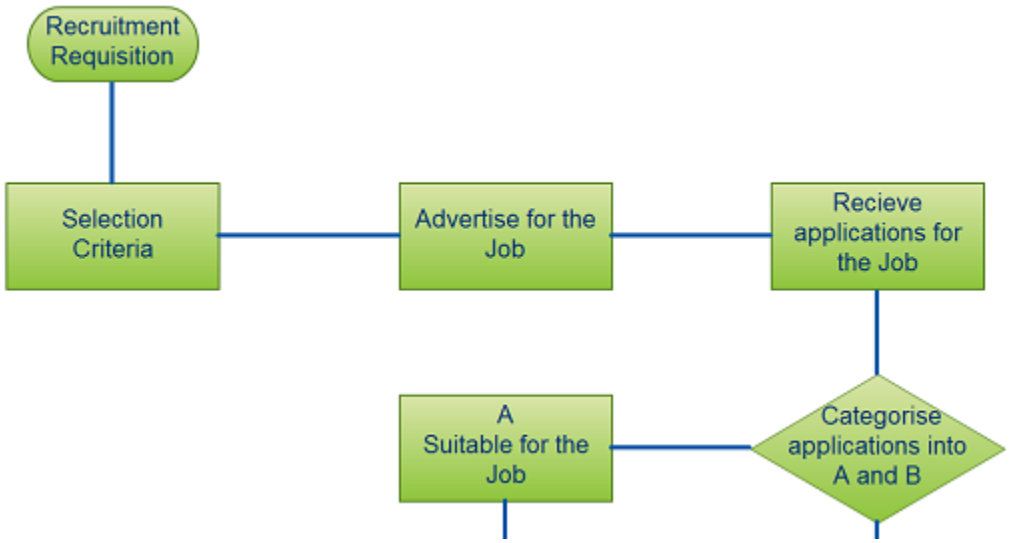
Maintaining a flowchart that is well proportioned is vital when it comes to avoiding a visual mess. As a rule of thumb, ensure that the height and width are in proportion to each other and the rest of the symbols in the flowchart. This is not, however, applicable to objects that are meant to be intentionally small, like connectors.

5. The need for consistent branch direction



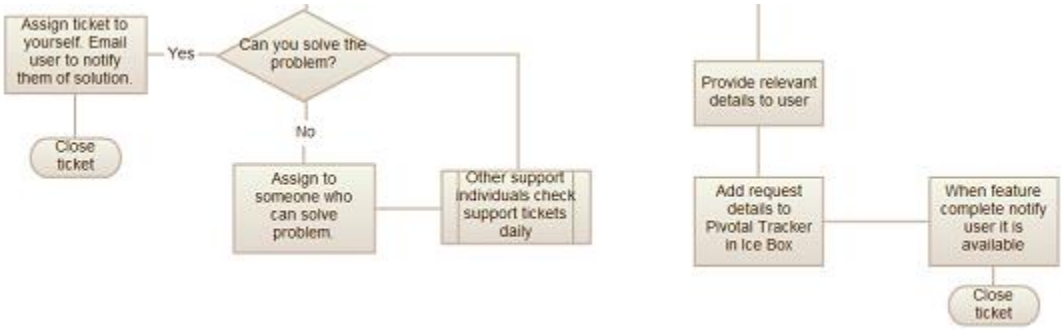
In a perfect world, a flowchart should be logical in all aspects. One of the areas that we do not pay much heed to is branch direction. The best example to illustrate this point is with Decision symbols. Ideally, TRUE conditions should flow out from the bottom while FALSE conditions should flow out from the right side.

6. Flowchart symbols and spacing



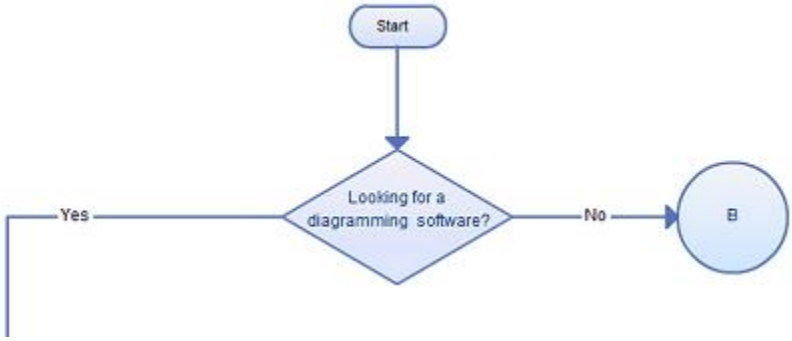
More often than not we choose to ignore this crucial point. To make your flowchart more professional you should maintain even spacing around symbols. The one exception to this rule would be Decision symbols, which require extra space to accommodate branch labels.

7. Remember to scale



One of the most basic facts that are overlooked is scaling. Too often a detailed flowchart is re-sized to fit just one page. This is never a good thing. It is better to have a flowchart span multiple pages than to be crammed into a small space, where all the details are unreadable. If you really aren't happy to span your flowchart over several pages you might like to create a high-level flowchart which incorporates several process steps in to one. Alternatively you can also group processes together and then collapse them to reduce the visual clutter of your flowchart.

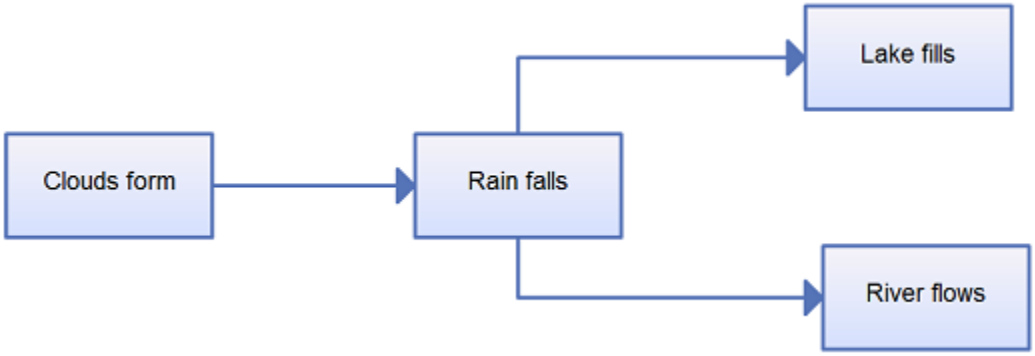
8. Extended flowcharts



If your flowchart is connected to another flowchart, then instead of putting it in just one page, it is best that you connect it via a circular node to the flowchart on a different page.

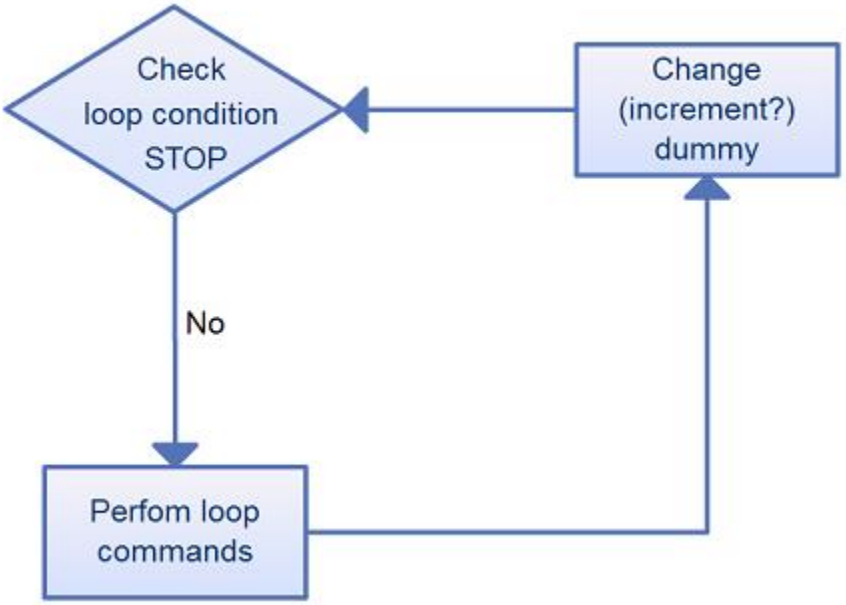
Well, that's the first 8 flowchart guidelines done and tidied away. Keep this list of flowchart guidelines to avoid flowchart mistakes handy and next time run through it at the end of your next flowcharting exercise. We'll go through the remaining 7 flowchart guidelines and flowchart mistakes in the next post. In the meantime, if you have a common flowchart mistake you think others should avoid let us know in the comments and we'll make sure it's covered.

9. Define alternate paths clearly



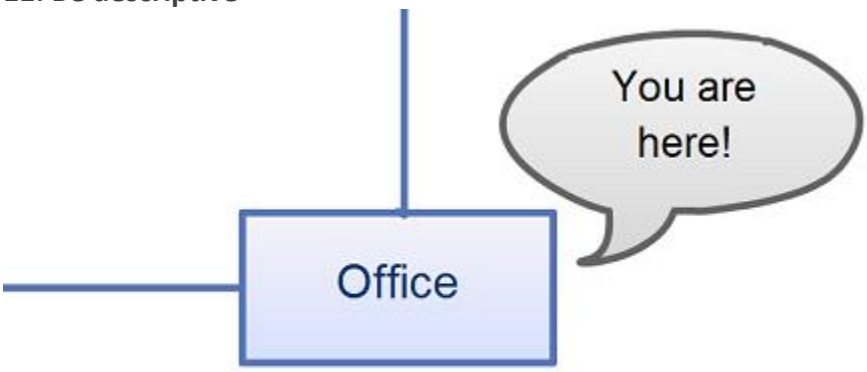
In certain flowcharts, processes do tend to fork. For the sake of clarity, it is best that you specify whether one branch needs to be followed or all of them.

10. Beware of loops



Processes may not run forever. However, make sure that you do document processes that may be too excessive that it affects the clarity of the flowchart.

11. Be descriptive



It is suggested that you use a footnote, a call out or even a separate document to offer more detail for those process step descriptions that may need more detail.

12. Use a flowchart key

One of the best practices of using flowcharts is to have a flowchart key describing the symbols that are used.

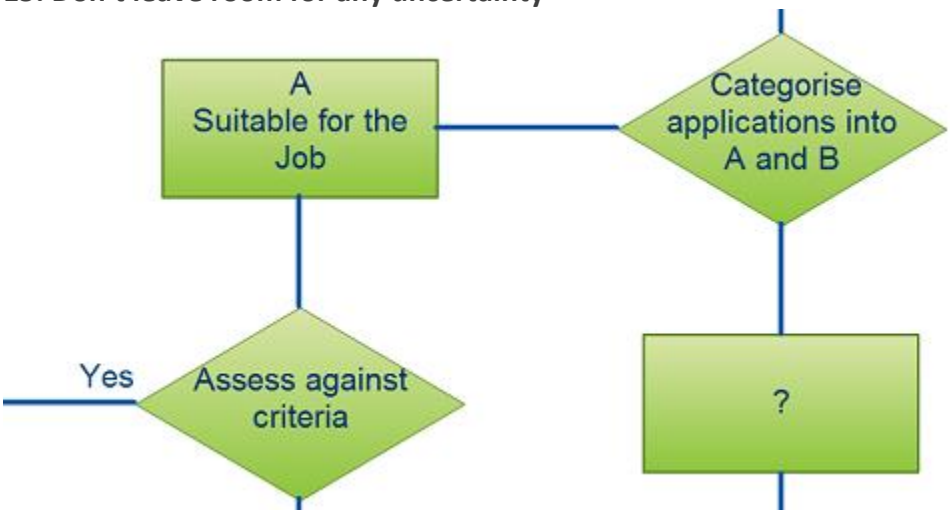
13. Battling inaccuracy

When drawing flowcharts, remember that verifying the flowchart steps is critical to avoid any inaccuracies.

14. Stick to one level of detail

It's best that you stick to a certain level of detail, e.g. a high-level, mid-level (like the diagram above) or detailed flowchart.

15. Don't leave room for any uncertainty



Planning ahead would mean that you avoid any unwanted mistakes. So ensure that you ask questions like, "What happens next?", "Is there a decision made now?", and "Has the process description been complete?"