# Lab: Flowcharts

## Background

Flowcharts use simple shapes and symbols to create a visual representation of a program’s operating process. Programmers can use this important tool, not only to organize their own work, but to more easily communicate a program’s structure to others.

## Instructions

Using the software of your choice, create flowcharts to represent the scenario outlined in each question. Software suggestions include:

* drawio (VS Code extension or <https://app.diagrams.net>)
* [Lucidchart](https://www.lucidchart.com/pages/" \t "_blank)
* [Microsoft Visio](http://www.office.com" \t "_blank)

1. Create a flowchart that describes the process of a student leaving home and arriving at school. As soon as the student leaves the house, they check the time. If they leave before 7 a.m., then they take the bus. If they leave exactly at 7 a.m. or after 7 a.m., they take the train. Both options result in the student arriving at school on time.

1. Create a flowchart for a program that divides customers into three age brackets:

* **Child:** age <= 14
* **Teenager:** 14 < age <= 18
* **Adult:** age > 18

The process starts by asking the user to enter a customer’s age. Check if the customer’s age is less than or equal to 14 years. If the answer to this question is “yes”, set age bracket to “Child”. If the answer is no, proceed to check the next age bracket and continue until an age bracket is determined. At the end, display/print the customer’s age and age bracket.