

# DIT636 / DAT560 - Test Design Activity

You have created a service intended to find all instances of a **pattern** in a **file**.  
You want to now design test specifications using the process discussed in Lectures 5-6.

`find(string pattern,string filename)`

This pattern can contain spaces and quotes. For example:

`find("john",myFile)`

Finds all instances of john in the file

`find("john smith",myFile)`

Finds all instances of john smith in the file

`find("“john” smith",myFile)`

Finds all instances of "john" smith in the file

Identify valid test specifications for this function.

1. **Identify the choices that you control when testing.**
  - For each input parameter (pattern, file), what aspects should you consider when testing?
  - Are there any additional environmental factors that you can control that will also impact the outcome of executing this service?
2. **For each choice, identify representative values that could lead to different outcomes of executing this service.**
  - These are the options you can select for that choice.
  - Try to group related values that lead to the same outcome (e.g., "positive integer" instead of 1, 2, 3, 4, 5, ...)
3. **Impose constraints on the representative values of different choices to reduce the pool of test cases.**
  - **error** constraints identify representative values that should result in an error no matter what values are selected for the *other* choices.
  - **single** constraints identify representative values that should result in normal execution, but should be tried once because they have the potential for error or strange behavior.
  - **if-constraints** identify representative values for choices that should only be used if particular values are used for other choices.
    - ("if choice X = THIS, then choice Y = THAT")