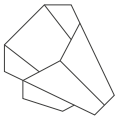
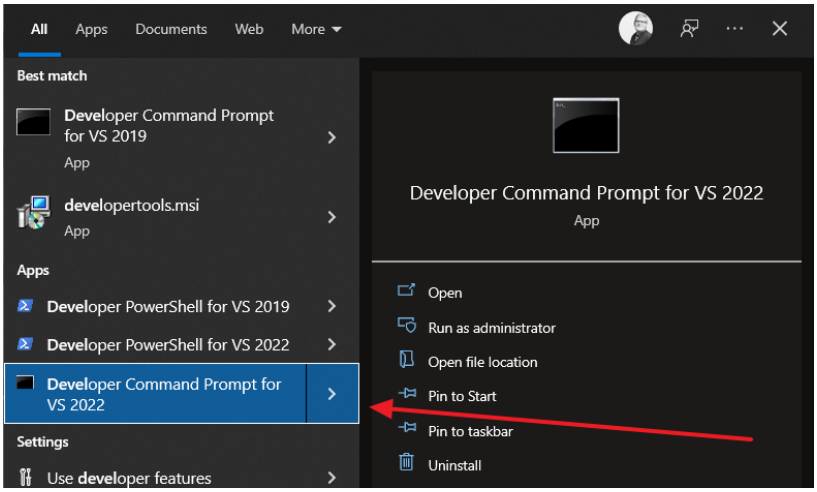


Read this first!

For these first exercises, you must only use Notepad++ and **Visual Studio** command line tools.

To get access to the *Developer Command Prompt for VS2022* from the start menu.



Exercise 1.1 Basic Compilation

Do [Kernighan, 1998] Exercises 1-1 and 1-2

Exercise 1.2 Understanding the compilation process

Recompile your *Hello World* program as

```
cl /FAs hello_world.c
```

Using the so-called compiler-directive "/FAs" instructs the compiler to save some intermediate files that are created as part of the compilation process.

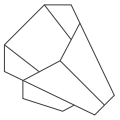
To get the pre-processor output file use

```
cl /P hello_world.c
```

- Study the content of the intermediate files, use Notepad++
- Which are human readable?
- Which is machine code?
- What are their contents?

For other command line options to *cl*:

https://docs.microsoft.com/en-us/cpp/build/reference/compiler-options-listed-alphabetically



Exercise 1.3 A slightly bigger and more interesting program

Do [Kernighan, 1998] Exercises 1-3 and 1-4

Keep the version of the program as the integer version (even though that it produces rounding errors). To make your life a bit easier, copy-paste the Fahrenheit program from here:

```
#include <stdio.h>
/* print Fahrenheit-Celsius table
   for fahr = 0, 20, ..., 300 */
main()
{
  int fahr, celsius;
  int lower, upper, step;
  lower = 0; /* lower limit of temperature scale */
  upper = 300; /* upper limit */
  step = 20; /* step size */

  fahr = lower;
  while (fahr <= upper) {
    celsius = 5 * (fahr-32) / 9;
    printf("%d\t%d\n", fahr, celsius);
    fahr = fahr + step;
  }
}
```