# Lecture 7: Introduction to C as a compiled, static, procedural programming language

As we have seen before, programming languages are classified based on various categories and attributes. One of these programming languages, and arguably the most famous one, is going to be the C programming language.
We will be covering it in our course as a static, compiled, procedural language, seeing what are the general attributes of such languages, how can we use them, and what are the relative applications that we would prefer to use these types of languages in.

How to start using C?

First we will need the tool that is going to “compile” our C code into machine language, which will be the “gcc” tool for us.
Here is how we will be using it:

Here are the steps to download GCC from WinLibs and add it to the PATH variable on Windows:

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## Step 1: Download GCC from WinLibs

1. **Visit WinLibs website**: Go to WinLibs official site.
2. **Select GCC version**: Choose the version of GCC you want to download (e.g., MinGW-w64 GCC).
3. **Download the archive**: Click on the appropriate version for your system (32-bit or 64-bit) and download the `.zip` file.

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## Step 2: Extract the Archive

1. Locate the downloaded `.zip` file in your `Downloads` folder.
2. Right-click on the file and select **Extract All** or use a tool like WinRAR/7-Zip to extract it.
3. Choose a location to extract the files (e.g., `C:\mingw-w64`).

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## Step 3: Add GCC to the PATH Variable

1. **Open Environment Variables**:
    - Press `Win + S` and search for "Environment Variables."
    - Select **Edit the system environment variables**.
    - Click the **Environment Variables** button.
2. **Modify the PATH Variable**:
    - Under **System Variables**, find and select the `Path` variable, then click **Edit**.

- Click **New** and add the path to the `bin` directory of the extracted GCC files. For example:

  ```
  C:\mingw-w64\bin
  ```

3. **Save Changes**:
   - Click **OK** to close all dialogs and save your changes.

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## Step 4: Verify the Installation

1. Open the Command Prompt (`Win + R`, type `cmd`, and press Enter).
2. Type the following command to check the GCC version:

   ```
   gcc --version
   ```

3. If installed correctly, it will display the GCC version.

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