

Pretest Report

CIS-310

Abdullah Akhtar

Github Link:

The files mentioned in this report is stored in the following github location:

[https://github.com/ajakhtar/CIS-310/tree/368243c166735c4ba09ba0a8b723b4f051ba23fc/Pretest/CIS310 Pretest DecConverter](https://github.com/ajakhtar/CIS-310/tree/368243c166735c4ba09ba0a8b723b4f051ba23fc/Pretest/CIS310%20Pretest%20DecConverter).

1. Required Tools

To compile the source code you need a C++ compiler that supports standard C++. If you do not already have a compiler installed, the recommended setups are:

- Windows: Install MinGW or use Visual Studio with C++ Build Tools
- macOS: Install Xcode Command Line Tools by running
`xcode-select --install`
- Linux: Install g++ using your package manager, for example
`sudo apt install g++`

2. Saving the Source File

Create a new file named `decimal_converter.cpp`, copy the entire program into the file. Make sure the file extension is `.cpp`.

3. Compiling the Program

The exact compile command depends on the compiler. The following commands will create an executable file from the source code.

Using g++ (Windows, macOS, Linux)

Open a terminal or command prompt in the same folder as the `.cpp` file and run:

```
g++ decimal_converter.cpp -o decimal_converter
```

This command produces an executable called `decimal_converter`. On Windows, the generated file will be:

```
decimal_converter.exe
```

After compiling, run the program from the Windows terminal:

```
decimal_converter.exe
```

Test Output:

| | | | |
|-----|-----------|----|----------------|
| 210 | 1101 0010 | D2 | 0010 0001 0000 |
| 211 | 1101 0011 | D3 | 0010 0001 0001 |
| 212 | 1101 0100 | D4 | 0010 0001 0010 |
| 213 | 1101 0101 | D5 | 0010 0001 0011 |
| 214 | 1101 0110 | D6 | 0010 0001 0100 |
| 215 | 1101 0111 | D7 | 0010 0001 0101 |
| 216 | 1101 1000 | D8 | 0010 0001 0110 |
| 217 | 1101 1001 | D9 | 0010 0001 0111 |
| 218 | 1101 1010 | DA | 0010 0001 1000 |
| 219 | 1101 1011 | DB | 0010 0001 1001 |
| 220 | 1101 1100 | DC | 0010 0010 0000 |
| 221 | 1101 1101 | DD | 0010 0010 0001 |
| 222 | 1101 1110 | DE | 0010 0010 0010 |
| 223 | 1101 1111 | DF | 0010 0010 0011 |
| 224 | 1110 0000 | E0 | 0010 0010 0100 |
| 225 | 1110 0001 | E1 | 0010 0010 0101 |
| 226 | 1110 0010 | E2 | 0010 0010 0110 |
| 227 | 1110 0011 | E3 | 0010 0010 0111 |
| 228 | 1110 0100 | E4 | 0010 0010 1000 |
| 229 | 1110 0101 | E5 | 0010 0010 1001 |
| 230 | 1110 0110 | E6 | 0010 0011 0000 |
| 231 | 1110 0111 | E7 | 0010 0011 0001 |
| 232 | 1110 1000 | E8 | 0010 0011 0010 |
| 233 | 1110 1001 | E9 | 0010 0011 0011 |
| 234 | 1110 1010 | EA | 0010 0011 0100 |
| 235 | 1110 1011 | EB | 0010 0011 0101 |
| 236 | 1110 1100 | EC | 0010 0011 0110 |
| 237 | 1110 1101 | ED | 0010 0011 0111 |
| 238 | 1110 1110 | EE | 0010 0011 1000 |
| 239 | 1110 1111 | EF | 0010 0011 1001 |
| 240 | 1111 0000 | F0 | 0010 0100 0000 |
| 241 | 1111 0001 | F1 | 0010 0100 0001 |
| 242 | 1111 0010 | F2 | 0010 0100 0010 |
| 243 | 1111 0011 | F3 | 0010 0100 0011 |
| 244 | 1111 0100 | F4 | 0010 0100 0100 |
| 245 | 1111 0101 | F5 | 0010 0100 0101 |
| 246 | 1111 0110 | F6 | 0010 0100 0110 |
| 247 | 1111 0111 | F7 | 0010 0100 0111 |
| 248 | 1111 1000 | F8 | 0010 0100 1000 |
| 249 | 1111 1001 | F9 | 0010 0100 1001 |
| 250 | 1111 1010 | FA | 0010 0101 0000 |
| 251 | 1111 1011 | FB | 0010 0101 0001 |
| 252 | 1111 1100 | FC | 0010 0101 0010 |
| 253 | 1111 1101 | FD | 0010 0101 0011 |
| 254 | 1111 1110 | FE | 0010 0101 0100 |
| 255 | 1111 1111 | FF | 0010 0101 0101 |

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