Course

ELEC-A7100
Course materials
Your points
Microsoft Teams
Code Vault

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Ninth round tasks as a `ZIP file.`

I/O - streams¶

In C language, input and output happens through I/O streams. I/O stream is an abstraction for delivery of ordered sequence of unstructured data. So far we have used two streams that are open by default in C programs: standard output, for printing text on the screen (**printf()** function), and standard input, for taking input from user. In addition to these, streams can be opened to other devices, for example, read and write to files, or for communication between devices or hosts, and so on. The main operations for I/O stream are reading and writing a byte stream. In addition, a stream needs to be opened before use (apart from stdin, stdout, and error stream stderr), and closed after use.

Stream input and output is buffered. **Buffer** is a memory area that temporary stores the bytes before delivering them forward. Buffers are commonly used to enhance system performance. As new input is available, it is first written to buffer, until data is delivered to user program. As program outputs data to stream, it first goes into buffer, until it can be delivered to the I/O resource (such as the terminal window in case of printing text to standard output stream. Because of the buffering, there may be delay between calling the output operation from program and time the output actually shows up.

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