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| East London Science School |
| A-Level Computer Science Project |
| JarChat |

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# 1: Analysis

## 1.1: Aims of JarChat

JarChat will aim to be a cross-platform IRC client which will support Windows, MacOS, Linux, and maybe more operating Systems not already listed. This will have the benefit of native cross-platform support as it is built-in to Java. Java’s JDK version 8 (Java version 1.8.0\_301) will be used to compile all binaries as most computers still run JDK version 8, even though Oracle has moved their LTS version to JDK 11.

## 1.2: Target Audience

I expect everyone who uses a computer to be able to take advantage of JarChat. While most services have moved their IM services to other platforms (Microsoft Teams, Skype, Discord, TeamSpeak, etc.), various FOSS (Free and Open-Sourced Software) still use IRC as their support protocol, taking advantage of IRC’s decentralized nature.

## 1.3: Research

### 1.3.1: Existing IRC Clients

#### 1.3.1.1: Windows

Existing Windows clients include mIRC, XChat, and HydraIRC.

##### 1.3.1.1.1: mIRC

mIRC is a paid and proprietary software which costs £17.94 (though it offers a 30-day free trial). It provides a slightly dated User Interface and was compiled in 32-bit form. This makes it compatible with 32-and-64-bit versions of Windows from Windows XP up to Windows 11. The UI makes use of a template too store different tabs as windows on a canvas. These windows cannot be moved or used in other parts of Windows. The settings menu leaves much to be desired and leaves few customization options. There is no option for IRC’s VOIP feature included with the software at any point.

Figure : Default look of mIRC, running on Windows 11 build 22449.1000 (Dev Insider Preview)

##### 1.3.1.1.2: XChat

XChat is another IRC client. Written in C, the Linux version is free and open-sourced under the GNU GPLv2 license. The client is precompiled for Windows and Fedora GNU/Linux, with forks available for Arch Linux (in the AUR), and with a precompiled \*.deb file in the official Debian and Ubuntu repositories. The Windows version of the software is closed-sourced and proprietary, costing users US$19.99 (equivalent to £14.42 in September of 2021), though it offers a 30-day free trial. The Windows version officially supports all Windows versions from Windows 2000 up to Windows 10 (all in 32-bit).

Figure : The first screen of the Windows version of XChat, running on Windows 11 build 22449.1000 (Dev Insider Preview)

I tried to use XChat to connect to my favorite IRC server, but the Windows version fialed to do so on Window sversions 7, 8.1, 10, and 11. This lack of ease of use is an issue that I would like to resolve with JarChat.