

CSCI251/CSCI851 Autumn-2020
Advanced Programming (LT1)

Lecture Tutorial 1

Outline

- Connecting to capa ... more added.
- Variable basics.
 - Naming.
 - ...
- Types for use ...

Connecting to capa

- Likely to be confirmed soon as the required compilation environment.
- `capa.its.uow.edu.au`
 - Linux server running Ubuntu 18.04 LTS
- Connect using SSH.
- You can develop in another environment but make sure your program works on capa.

- Windows : Download the Bitvise installer from on Moodle and install in.
- MacOS: There is supposed to be a MacOS Bitvise too.
- There are various other programs that facilitate similar SSH server connection, but Bitvise is the one in the lab.

Host

Port

Username
Use your
own one...

Bitvise SSH Client 8.38

[Closing and minimization](#)

Default profile

Load profile
Save profile as
New profile
Reset profile

Login Options Terminal RDP SFTP Services C2S S2C SSH Notes About

Server

Host

Port ☐ Enable obfuscation

Obfuscation keyword

Authentication

Username

Initial method

☐ Store encrypted password in profile

Password

☒ Enable password over kbd fallback

Elevation

Kerberos

SPN

☐ GSS/Kerberos key exchange

☐ Request delegation

☒ gssapi-keyex authentication

[Proxy settings](#) [Host key manager](#) [Client key manager](#) [Help](#)

11:27:44.211 Current date: 2020-03-12
11:27:44.211 Bitvise SSH Client 8.38, a fully featured SSH client for Windows.
Copyright (C) 2000-2020 by Bitvise Limited.
11:27:44.211 Visit www.bitvise.com for latest information about our SSH software.
11:27:44.211 Run 'BvSsh -help' to learn about supported command-line parameters.
11:27:44.211 Cryptographic provider: Windows CNG (x86) with additions
11:27:44.637 Loading default profile.
11:27:45.799 Automatic check for updates completed successfully.
11:27:45.799 Version status: Current
This is the latest release.

Log in Exit

- When you then use login...
- ... make sure the fingerprints match ...

Host Key Verification



New host key

Either the connection to this host is being established for the first time or the host key has been removed from, or never saved to the database.

Please contact the server's administrator and verify the received key. Accepting the host key without verification is **not recommended**.

Connecting to **capa.its.uow.edu.au:22**

Host key algorithm: **RSA**, size: **2048** bits.

MD5 Fingerprint:

69:bb:1a:08:c2:b1:eb:88:e2:5a:80:f2:4d:7a:99:40

Bubble-Babble:

xotag-tydig-riluv-feteb-golip-tybep-nybed-maven-cidun-rycor-fuxox

SHA-256 Fingerprint:

zKcE0aF/MzbNFkf1b6RYUb7GGHUdXC+HOrpYmN5f3C8

Accept and Save

Accept for This Session

Cancel

Variable basics.

- Variables are used to store data, that is representations of information/knowledge.
- Data vs information...
- For example, we want to keep track of the temperature.

Naming variables...

- Names give meaning.
- Sensible length.

Magic numbers ...

- Using a constant with a name gives information.

```
while ( temp < 100)
```

```
while ( temp < waterBoilingPoint )
```

A problem? Is temp a good name?

Types for use and meaning ...

- Numbers ... integers, double, float:
Different levels of precision.
 - Precision and range ...