## Golang Lab setup

## Step 1 – Install Go on Ubuntu

Login to your Ubuntu system using ssh and upgrade to apply latest security updates there.

sudo apt-get update

sudo apt-get -y upgrade

Now download the Go language binary archive file using following link. To find and download latest version available or 32 bit version go to official [download page](https://golang.org/dl/).

wget <https://dl.google.com/go/go1.15.2.linux-amd64.tar.gz>

Now extract the downloaded archive and install it to the desired location on the system. For this tutorial, I am installing it under /usr/local directory. You can also put this under the home directory (for shared hosting) or other location.

sudo tar -xvf go1.15.3.linux-amd64.tar.gz

sudo mv go /usr/local

## Step 2 – Setup Go Environment

Now you need to setup Go language environment variables for your project. Commonly you need to set 3 environment variables as **GOROOT**, **GOPATH** and **PATH**.

* **GOROOT** is the location where Go package is installed on your system.
* export GOROOT=/usr/local/go
* **GOPATH** is the location of your work directory. For example my project directory is **~/Projects/Proj1** .
* export GOPATH=$HOME/Projects/Proj1
* Now set the **PATH** variable to access go binary system wide.
* export PATH=$GOPATH/bin:$GOROOT/bin:$PATH

All the above environment will be set for your current session only. To make it permanent add above commands in **~/.profile** file.

## Step 3 – Verify Installation

At this step, you have successfully installed and configured go language on your system. First, use the following command to check the Go version.

**go version**

go version go1.15.2 linux/amd64

Now also verify all configured environment variables using following command.

**go env**

GOARCH="amd64"

GOBIN=""

GOCACHE="/root/.cache/go-build"

GOEXE=""

GOHOSTARCH="amd64"

GOHOSTOS="linux"

GOOS="linux"

GOPATH="/root/Projects/Proj1"

GORACE=""

GOROOT="/usr/local/go"

GOTMPDIR=""

GOTOOLDIR="/usr/local/go/pkg/tool/linux\_amd64"

GCCGO="gccgo"

CC="gcc"

CXX="g++"

CGO\_ENABLED="1"

...

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