**# GO-Programming Language (Installation @ Kali-Linux):**

**1) To Check, System Architecture:**

uname -m

* x86\_64 → amd64
* aarch64 → arm64

**2) Download, Go-Binary:**

* Download the tarball to your home directory using wget. **For amd64:**

wget https://go.dev/dl/go1.23.6.linux-amd64.tar.gz

* **For arm64:**

wget https://go.dev/dl/go1.23.6.linux-arm64.tar.gz

**3) Now, Remove any previous Go Installation:**

* User: **Root user**

sudo rm -rf /usr/local/go

**4) Extract, Go-Binary:**

* User: **Root user**

sudo tar -C /usr/local -xzf go1.23.6.linux-amd64.tar.gz

* **Verify Extraction:**

ls /usr/local/go

**5) Set-up Go Environment:**

* User: **Normal user**

nano ~/.zshrc

**Append the following lines:**

export GOROOT=/usr/local/go

export GOPATH=$HOME/go

export PATH=$PATH:$GOROOT/bin:$GOPATH/bin

GOROOT=/usr/local/go: Points to the Go installation (optional, as modern Go auto-detects it).

GOPATH=$HOME/go: Sets the workspace for Go projects.

PATH=$PATH:$GOROOT/bin:$GOPATH/bin: Adds Go’s binary and user-installed tools to PATH.

Save: Press **Ctrl+O, Enter, Ctrl+X.**

* Apply changes:

source ~/.zshrc

* Alternative: Using ~/.profile

User: **Normal user**

nano ~/.profile

**Append the following line:**

export GOROOT=/usr/local/go

export GOPATH=$HOME/go

export PATH=$PATH:$GOROOT/bin:$GOPATH/bin

source ~/.profile

* **Ensure Zsh loads ~/.profile by adding to ~/.zshrc:**

nano ~/.zshrc

* **Add:**

[[ -f ~/.profile ]] && . ~/.profile

* **Save and Apply:**

source ~/.zshrc